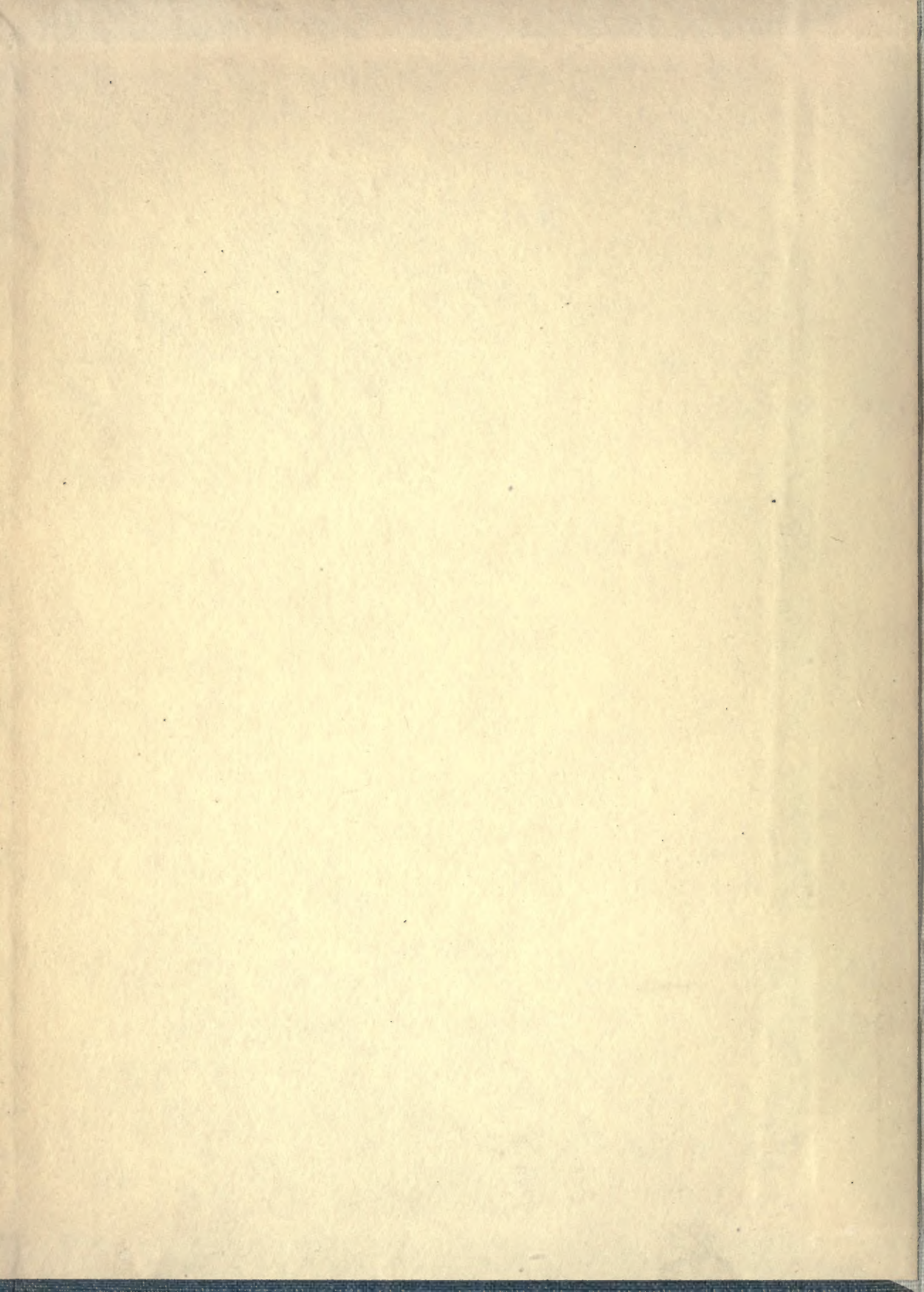






Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

P. Lane.

2

**THE CARNEGIE FOUNDATION
FOR THE ADVANCEMENT OF TEACHING**

**EIGHTH ANNUAL REPORT
OF THE
PRESIDENT AND OF THE TREASURER**

\$1.85

576 FIFTH AVENUE
NEW YORK CITY
October, 1913

*135-454
11/12/14*

LB

2334

C-3

1912/13

D. B. UPDIKE, THE MERRYMOUNT PRESS, BOSTON

OFFICERS OF ADMINISTRATION AND TRUSTEES

HENRY SMITH PRITCHETT	<i>President</i>
ROBERT A. FRANKS	<i>Treasurer</i>
CLYDE FURST	<i>Secretary</i>

TRUSTEES

WILLIAM PETERSON	<i>Chairman</i>
WILLIAM FREDERICK SLOCUM	<i>Vice-Chairman</i>
CHARLES FRANKLIN THWING	<i>Secretary of the Board</i>
HILL MCCLELLAND BELL	DAVID STARR JORDAN
WILLIAM LOWE BRYAN	HENRY CHURCHILL KING
NICHOLAS MURRAY BUTLER	ABBOTT LAWRENCE LOWELL
THOMAS MORRISON CARNEGIE	THOMAS MCCLELLAND
EDWIN BOONE CRAIGHEAD	SAMUEL BLACK MCCORMICK
WILLIAM HENRY CRAWFORD	SAMUEL PLANTZ
GEORGE HUTCHESON DENNY	HENRY SMITH PRITCHETT
ROBERT A. FRANKS	JACOB GOULD SCHURMAN
ARTHUR TWINING HADLEY	JAMES MONROE TAYLOR
ALEXANDER CROMBIE HUMPHREYS	FRANK ARTHUR VANDERLIP
CHARLES RICHARD VAN HISE	

EXECUTIVE COMMITTEE

HENRY SMITH PRITCHETT, <i>ex officio</i>	
NICHOLAS MURRAY BUTLER	ALEXANDER CROMBIE HUMPHREYS
ROBERT A. FRANKS	JACOB GOULD SCHURMAN
ARTHUR TWINING HADLEY	FRANK ARTHUR VANDERLIP

CONTENTS

REPORT OF THE PRESIDENT

PART I

THE BUSINESS OF THE YEAR

	PAGE
Endowment, Income, and Expenditure	3
The Annual Meeting of the Trustees	4
The Executive Committee	6
Allowances granted during the Year	8
Summary of Allowances granted since the Beginning of the Foundation	11
Admission of the Rensselaer Polytechnic Institute	16
The Division of Educational Enquiry	19
The Carnegie Corporation of New York	24
A Study of Education in Vermont	26
The Study of Legal Education	27
The Decreasing List of Medical Schools	31
Supplementary Pension Systems	33
New Pension Systems	36
New York Municipal Pensions	47
The Exchange of Teachers between Prussia and the United States	56

PART II

CURRENT EDUCATIONAL PROBLEMS

The Evolution of College Entrance Requirements	63
State Regulation of Higher Education	67
Politics and Education in Iowa	78
Improvements in the Financial Status of College Teachers	98
College Catalogues	111

CONTENTS

PART III

De Mortuis

125

::

REPORT OF THE TREASURER

139

INDEX

151

REPORT OF THE PRESIDENT

PART I

THE BUSINESS OF THE YEAR

REPORT OF THE PRESIDENT

To the Chairman and Trustees of the Carnegie Foundation for the Advancement of Teaching:

I HAVE the honor to present, in accordance with the by-laws, the Eighth Annual Report of the Carnegie Foundation for the Advancement of Teaching, for the fiscal year ending September 30, 1913.

The work of the year and the content of the present annual report have been in large measure influenced by two events, — the gift by Mr. Carnegie of a special endowment creating a Division of Educational Enquiry, and a formal request from the state of Vermont calling upon the Foundation to undertake for the use of the Vermont Educational Commission a thoroughgoing study of the educational situation in that state. Both of these matters are dealt with in more complete form in succeeding paragraphs. It is enough to say at the beginning of this report that for the greater part of the year the energies of those connected with the executive work of the Foundation have been absorbed by the Vermont study. The report of that study, very soon to be issued, contains in effect the report of the principal activities of the Foundation during the year. The present annual report is therefore mainly given to an account of the current business and to discussions of a few educational causes of immediate interest which are in the nature of a continuation of studies already begun.

ENDOWMENT, INCOME, AND EXPENDITURE

THE permanent endowment of the Foundation has been increased during the past year by the addition of a fund of \$1,250,000 in four per cent bonds, yielding an income of fifty thousand dollars a year. By the conditions of the gift this endowment must be kept separate from the main endowment, and cannot be used for pensions. The following annual summary and those of subsequent years will therefore present separately the exhibits of these trust funds.

The trustees held in trust at the close of the fiscal year the following securities, given at their face value:

(a) General Endowment

United States Steel Corporation 50 year 5 per cent Gold Bonds	\$12,500,000.00
Other Securities	1,575,000.00
Total	<u>\$14,075,000.00</u>

(b) Division of Educational Enquiry

Total	<u>1,250,000.00</u>
	<u>\$15,325,000.00</u>

THE BUSINESS OF THE YEAR

During the fiscal year the trustees received from the general endowment an income of \$694,195.81, and from the endowment of the Division of Educational Enquiry \$44,300.08.

The expenditures have been as follows:

(a) General Endowment

Retiring Allowances and Pensions in Institutions
on the Associated List

Officers and Teachers	\$416,626.37	
Widows	<u>62,360.77</u>	\$478,987.14

Retiring Allowances and Pensions granted to
Individuals

Officers and Teachers	\$102,814.10	
Widows	<u>18,588.77</u>	121,402.87

Expenses of Administration

\$36,632.22

Publication

3,579.15

40,211.37

Total

\$640,601.38

(b) Division of Educational Enquiry

Salaries and Professional Fees

\$10,192.58

Travel and other Expenses

5,035.90

Publication

2,601.91

Total

\$17,830.39

THE ANNUAL MEETING OF THE TRUSTEES

THE seventh annual meeting of the trustees was held on November 20, 1912. The chairman of the board, Principal Peterson of McGill University, presided. Twenty-two trustees were present, and the annual custom under which the founder of the institution meets the trustees was most pleasantly continued.

In the annual election of officers President William Frederick Slocum of Colorado College was chosen vice-chairman of the board and President Butler of Columbia University and President Humphreys of Stevens Institute of Technology were re-elected for the statutory term of three years as members of the executive committee.

The trustees considered a number of questions which had already been referred to and reported upon by the executive committee.

Perhaps the most important of these recommendations was that dealing with the payment of retiring allowances to professors who elect after the age of sixty-five to continue part-time work in their institutions upon diminished pay. The trustees adopted the following amendment to Rule 1:

"In reckoning the amount of the retiring allowance the average salary for the last five years of service shall be considered the active pay. In case, however,

a professor agrees with his institution to continue at any time after reaching the age of sixty-five part-time work for a diminished salary, he may do so, and upon his retirement his allowance shall be computed upon the basis of the last five years of full pay. In the case of his death in this interval the pension of his widow shall be reckoned upon the same basis."

Hitherto the retiring allowance granted under the rules of the Foundation has been based upon the average salary paid for the last five years, regardless of what amount of service they represent. Experience has shown that a professor may oftentimes with advantage discontinue a portion of his work. Not infrequently it happens that such a man, by concentrating his energies upon a smaller number of courses, may, from his long experience, render most useful service. The rules of the Foundation, as they were framed hitherto, made it practically impossible for this arrangement to go into effect without correspondingly reducing the amount of the teacher's pension. A professor was, under the rules, obliged either to continue full duty or to retire altogether. This difficulty is obviated by the amendment just quoted, and the rules of the Foundation are thereby rendered more flexible.

At the request of the trustees the executive committee reported upon the feasibility of several proposals brought before the trustees looking toward the granting, at the age of sixty-five, of a retiring allowance to a teacher who had previously completed twenty-five years of service, and who had retired from teaching at the end of that period. With regard to this provision it should be noted that under the amendment to the rules adopted in 1910, any associated college may now, upon its own motion, grant a retiring allowance to a teacher at the completion of his twenty-five years of service, and this pension will be assumed by the Foundation at the beginning of his sixty-fifth year. This provision was intended to meet the cases of men who were not quite able to serve until the minimum age limit, and who for one reason or another desired to retire from teaching. It would be quite another matter to make it possible for any teacher to retire at the end of twenty-five years in order to go into another occupation and yet claim a pension when his sixty-fifth year arrived. The trustees, in accordance with the recommendation of the executive committee, deemed such a provision unwise.

The trustees considered likewise the possibility of broadening the present rule of retiring allowances for those engaged in research. After deliberation, however, the trustees agreed with the executive committee that the present rule seemed adequate. A pension system such as that conducted by the Foundation is intended to provide against superannuation and disability. Experience has shown that to go beyond this and to attempt to utilize a pension system to stimulate research is a policy that has not been successful in other pension systems that have allowed themselves to be diverted from their primary objects.

The executive committee reported to the trustees further upon the request of a joint committee on engineering education that the Foundation undertake a study of

engineering education in the United States. The executive committee suggested that while such a study would undoubtedly be of great value, if thoroughly made, the Foundation had under way at present certain work that should be finished before new studies were entered upon.

It will become the duty of the board at the approaching annual meeting to elect a trustee to fill the vacancy caused by the resignation of President Remsen of Johns Hopkins University, presented under date of June 7, 1913.

THE EXECUTIVE COMMITTEE

Six meetings of the executive committee were held during the fiscal year. Printed minutes of these meetings, with detailed statements of the current receipts and expenditures, were mailed to the trustees after each meeting. A list of all the retiring allowances and pensions voted by the committee during the year is given in the following pages.

The resolution of November 12, 1908, which continued the privileges of the retiring allowance system to professors in associated institutions who undertake service in the School of Classical Studies at Rome, was extended so as to cover cases where similar positions are accepted in the American Academy in Rome, into which the School of Classical Studies has been merged.

Communications were received by the committee from several institutions exclusively devoted to research, requesting that workers in these institutions be considered eligible for retiring allowances. In accordance with its well-established policy, the committee decided in each case that it was impossible to extend this privilege to detached institutions.

Considerable time has been spent by the committee in the examination of the question as to the admission to the privileges of the retiring allowance system of professors in a conservatory of music upon the same basis as that of professors in a college of liberal arts. Notwithstanding the fact that students in such a conservatory may be admitted upon the same plane of entrance requirements as those in other schools of the college, it still appears doubtful to the committee whether the large number of teachers in the conservatory of music who are engaged mainly in teaching the technique of playing or singing should be ranked with the smaller number who teach what may be called the theory of music. The committee has not felt itself in a position to act upon such requests until some clearer differentiation of these two classes of musical teachers has been made.

Similar difficulties have arisen in attempting to define other terms used with different meanings in different colleges. Thus, the term "demonstrator" has generally been applied to those having temporary appointments and receiving only nominal salaries. In a few institutions this title has been used to designate men having permanent positions and doing work equivalent to that of an assistant professor. The committee

is inclined to feel, however, that this practice is limited to so few institutions that the term "demonstrator" should be applied only to those holding temporary positions, and that men whose work is of a permanent and responsible nature should be given another title.

By far the most important matters that have come before the executive committee were the consideration of the additional endowment offered by Mr. Carnegie for the establishment of a Division of Educational Enquiry and the request of the Educational Commission of the state of Vermont for a thoroughgoing study of the educational situation in that state. The committee, upon the unanimous vote of the trustees, accepted the generous endowment tendered by Mr. Carnegie, and a short time after that acceptance authorized the president of the Foundation to undertake the study desired by those representing the state of Vermont. The details of both of these matters are given in the sections that follow.

ALLOWANCES GRANTED DURING THE YEAR

1. IN INSTITUTIONS ON THE ASSOCIATED LIST

RETIRING ALLOWANCES

<i>Institution</i>	<i>Name</i>	<i>Academic Title</i>	<i>Date Effective</i>
BELOIT COLLEGE.....	THOMAS ALEXANDER SMITH, PH.D....	Professor of Mathematics and Physics.....	June 18, 1913
BOWDOIN COLLEGE.....	IRA P. BOOKER.....	Treasurer.....	July 1, 1913
UNIVERSITY OF CALIFORNIA.....	JOACHIM HENRY SENGER, PH.D.....	Associate Professor of German...	Sept. 11, 1913
COLUMBIA UNIVERSITY.....	HENRY MARION HOWE, A.M., LL.D....	Professor of Metallurgy.....	July 1, 1913
DARTMOUTH COLLEGE.....	CHARLES FRANKLIN EMERSON, A.M....	Dean of Academic Faculty.....	July 1, 1913
DICKINSON COLLEGE.....	OVANDO BYRON SUPER, PH.D.....	Professor of Romance Languages	June 1, 1913
HARVARD UNIVERSITY.....	WILLIAM ELWOOD BYERLY, PH.D....	Professor of Mathematics.....	Dec. 13, 1914
	FRANCIS GREENWOOD PRABODY, A.M., D.D., LL.D.....	Plummer Professor of Christian Morals.....	Mar. 1, 1913
JOHNS HOPKINS UNIVERSITY.....	IRA REMSEN, M.D., PH.D., LL.D.....	President and Professor of Chem- istry.....	Sept. 1, 1913
LAWRENCE COLLEGE.....	EMANUEL GERECHTER.....	Professor of German.....	June 15, 1913
LEHIGH UNIVERSITY	ARTHUR E. MEAKER, C.E.....	Professor of Mathematics.....	Feb. 8, 1913
MASSACHUSETTS INSTITUTE OF TECH- NOLOGY.....	GAETANO LANZA, C.E., M.E.....	Professor of Theoretical and Ap- plied Mechanics.....	Oct. 1, 1913
	THOMAS E. POPE, A.M.....	Professor of Inorganic Chemistry	Aug. 1, 1913
PRINCETON UNIVERSITY.....	FRANCIS LANDEY PATTON, D.D., LL.D.....	Professor of Ethics and the Phi- losophy of Religion.....	July 1, 1913
PURDUE UNIVERSITY.....	EMMA M. McRAE, A.M.....	Professor of English.....	July 1, 1913
UNIVERSITY OF TORONTO.....	HENRY MONTGOMERY, A.M., PH.D....	Professor of Natural Science and Curator of Museum.....	Jan. 1, 1913
	WILLIAM HENRY VAN DER SMID- SEN, A.M.....	Professor of German.....	July 1, 1913
VASSAR COLLEGE.....	GEORGIA A. KENDRICK.....	Lady Principal.....	July 1, 1913
UNIVERSITY OF VIRGINIA.....	ALBERT HENRY TUTTLE, M.SC.....	Professor of Biology and Agricul- ture.....	Sept. 15, 1913
WESTERN RESERVE UNIVERSITY.....	CHARLES JOSIAH SMITH, A.M.....	Professor of Mathematics.....	July 1, 1913
UNIVERSITY OF WISCONSIN.....	STEPHEN MOULTON BARCOCK, PH.D., LL.D.....	Professor of Agricultural Chem- istry.....	July 1, 1913
YALE UNIVERSITY.....	JOHN FERGUSON WEIR, A.M., N.A....	Professor of Painting and Design, and Director of Yale Art School	July 1, 1913

WIDOWS' PENSIONS

<i>Institution</i>	<i>Name</i>	<i>Husband's Title</i>	<i>Date Effective</i>
UNIVERSITY OF CALIFORNIA.....	MRS. FRANK SOULÉ*.....	Professor of Civil Engineering...	Mar. 15, 1913
MARIETTA COLLEGE.....	MRS. MARTIN R. ANDREWS.....	Professor of History and Econom- ics.....	May 21, 1913
UNIVERSITY OF ROCHESTER.....	MRS. SAMUEL A. LATTIMORE.....	Professor of Chemistry.....	Mar. 18, 1913
UNIVERSITY OF VIRGINIA.....	MRS. JOHN W. MALLETT.....	Professor of Chemistry.....	Dec. 7, 1912
WASHINGTON AND JEFFERSON COL- LEGE.....	MRS. GEORGE B. McCUTCHEN.....	Professor of Mathematics.....	Feb. 25, 1913
WILLIAMS COLLEGE.....	MRS. EBEN B. PARSONS.....	Professor of Mathematics.....	Feb. 24, 1913
YALE UNIVERSITY.....	MRS. LEWIS O. BRASTOW.....	Professor of Practical Theology	Sept. 11, 1912
	MRS. EUGENE L. RICHARDS.....	Professor of Mathematics.....	Sept. 6, 1912

* Died July 3, 1913.

2. IN INSTITUTIONS NOT ON THE ASSOCIATED LIST

RETIRING ALLOWANCES

<i>Institution</i>	<i>Name</i>	<i>Academic Title</i>	<i>Date Effective</i>
UNIVERSITY OF COLORADO	JAMES H. BAKER, A.M., LL.D.....	President	Jan. 1, 1914
HIRAM COLLEGE	COLMAN BANCROFT, A.M., PH.D.....	Professor of Mathematics and Astronomy	June 17, 1913

WIDOW'S PENSION

<i>Institution</i>	<i>Name</i>	<i>Husband's Title</i>	<i>Date Effective</i>
UNIVERSITY OF NORTH CAROLINA ...	MRS. THOMAS HUME	Professor of English Literature	Aug. 16, 1912

FINANCIAL DATA CONCERNING ALLOWANCES GRANTED DURING THE FISCAL YEAR

OCTOBER 1, 1912, TO SEPTEMBER 30, 1913

PARTICIPANTS	Number of Allowances Granted	Average Age at Date of Retirement	Average Length of Service	Number of Deaths during the Year	Average Amount of Allowance	TOTAL GRANT FOR THE YEAR
PROFESSORS AND OFFICERS IN INSTITUTIONS ON THE ACCEPTED LIST.....	22	67.6	33.5	14	\$1,980.68	\$43,575
PROFESSORS AND OFFICERS IN INSTITUTIONS NOT ON THE ACCEPTED LIST.....	2	67	29	10	\$2,100.00	\$4,200
WIDOWS OF PROFESSORS AND OFFICERS IN INSTITUTIONS ON THE ACCEPTED LIST...	8			2	\$351.25	\$8,810
WIDOWS OF PROFESSORS IN INSTITUTIONS NOT ON THE ACCEPTED LIST.....	1			2	\$600.00	\$600
TOTAL.....	33			28	GENERAL AVERAGE OF RETIRING ALLOWANCES \$1,990.63	\$55,185

ALLOWANCES NOW IN FORCE

FINANCIAL SUMMARY ON SEPTEMBER 30, 1913

GRANTEES	Number of Allowances in Force				Average Age at Date of Retirement			Average Length of Service			Average Amount of Allowance			TOTAL GRANT IN FORCE SEPT. 30, 1913
	On basis of age	On basis of service	On basis of disability	Total	Retired on basis of age	On basis of service	On basis of disability	Retired on basis of age	On basis of service	On basis of disability	On basis of age	On basis of service	On basis of disability	
PROFESSORS AND OFFICERS IN ACCEPTED INSTITUTIONS...	166	66	11	243	69	63.3	57.5	32.3	33.9	28.8	\$1,805.96	\$1,861.13	\$1,305.45	\$436,985
PROFESSORS AND OFFICERS NOT IN ACCEPTED INSTITUTIONS	43	28	3	72	68.2	64.9	63	29.8	36.5	32.3	\$1,355.00	\$1,466.73	\$1,073.33	\$99,620
WIDOWS OF PROFESSORS AND OFFICERS IN ACCEPTED INSTITUTIONS				67							\$938.88			\$62,905
WIDOWS OF PROFESSORS AND OFFICERS NOT IN ACCEPTED INSTITUTIONS				21							\$807.62			\$16,360
TOTAL				403							GENERAL AVERAGE OF RETIRING ALLOWANCES \$1,708.61			\$616,470

TOTAL NUMBER OF ALLOWANCES GRANTED

YEAR	INSTITUTIONS	Age	Service	Permanent Disability	Temporary Grants	Widows	Total	Deduct		Net Increase	Allowances & Pensions in Force at End of Year
								For Deaths	For Discontinuances		
1906 ¹	Accepted Institutions	21	18		7	5	51			51	
	Unaccepted Institutions	18	15		4	3	40	1		39	90
1906-7	Accepted Institutions	24	14		2	7	47	9		38	
	Unaccepted Institutions	8	16		3	1	28	8		20	148
1907-8	Accepted Institutions	18	18		4	9	49	8	1	40	
	Unaccepted Institutions	11	9		4	6	30	5	1	24	212
1908-9	Accepted Institutions	29	25		8	13	75	5		70	
	Unaccepted Institutions	18	15		4	3	40	2	1	37	319
1909-10	Accepted Institutions	26	7	2	4	7	46	11	11	24	
	Unaccepted Institutions	10		1	2	5	18	12	3	3	346
1910-11	Accepted Institutions	21		6	2	13	41	15		26	
	Unaccepted Institutions		1		1	4	6	2	3	1	373
1911-12	Accepted Institutions	29		3		11	43	11	2	30	
	Unaccepted Institutions	2				3	5	9	1	5 ³	398
1912-13	Accepted Institutions	22				8	30	16		14	
	Unaccepted Institutions	2				1	3	12		9 ³	403
	Totals	259	138	12	45	99	552	126	23	403	

¹ July 1 to September 30. ³ Decrease.

GEOGRAPHICAL DISTRIBUTION OF ALLOWANCES GRANTED

STATE, TERRITORY, OR PROVINCE	Number of Allowances granted			Deaths	Temporary Allowances Discon- tinued	Number of Allow- ances in Force
	In Institutions on the Associated List	In Institutions not on the Associated List	Total			
NORTH ATLANTIC DIVISION						
MAINE	8	3	11	2	1	8
NEW HAMPSHIRE	8		8	1	1	6
VERMONT	3		3			3
MASSACHUSETTS	70	3	73	14	3	56
RHODE ISLAND		1	1			1
CONNECTICUT	29	3	32	5		27
NEW YORK	71	8	79	20	4	55
NEW JERSEY	19		19	6		13
PENNSYLVANIA	27	9	36	8	1	27
Total	262					
SOUTH ATLANTIC DIVISION						
MARYLAND	6		6	1		5
DISTRICT OF COLUMBIA.....	2	5	7	2		5
VIRGINIA	9	11	20	7		13
WEST VIRGINIA		4	4			4
NORTH CAROLINA		7	7	3		4
SOUTH CAROLINA		7	7	3		4
GEORGIA		4	4	2		2
FLORIDA		3	3			3
Total	58					
SOUTH CENTRAL DIVISION						
KENTUCKY	4	4	8	2		6
TENNESSEE		8	8	2		6
ALABAMA		5	5	3		2
MISSISSIPPI		2	2			2
LOUISIANA	10		10	2	1	7
Total	33					
NORTH CENTRAL DIVISION						
OHIO	16	16	32	8	2	22
INDIANA	9	5	14	2		12
ILLINOIS	3	6	9	2	2	5
MICHIGAN	10	4	14	2		12
WISCONSIN	18		18	5		13
MINNESOTA	16	1	17	2		15
IOWA	7	14	21	3	4	14
MISSOURI	11	4	15	3		12
NORTH DAKOTA		3	3	2		1
NEBRASKA		1	1			1
KANSAS.....		3	3		1	2
Total	147					
WESTERN DIVISION						
MONTANA		2	2	1		1
COLORADO.....	2	5	7		2	5
CALIFORNIA	11	8	19	7	1	11
OREGON.....		3	3	1		2
Total	31					
THE DOMINION OF CANADA						
ONTARIO.....	2	1	3			3
QUEBEC	10		10	3		7
NOVA SCOTIA	2		2			2
NEW BRUNSWICK		3	3	1		2
PRINCE EDWARD ISLAND...		1	1			1
Total	19					
NEWFOUNDLAND						
		2	2	1		1
Total	2					
Grand Total	383	169	552	126	23	403

TOTAL EXPENDITURE IN ALLOWANCES

YEAR	INSTITUTIONS	Number of Institutions	Number of Teachers in Faculties	Number of Retired Teachers on Roll	Average Age at Retirement on Basis of Age	Amount of Retiring Allowances Paid	Number of Widows Pensioned	Amount of Widows Pensions Paid	Total Load of Allowances and Pensions	Total Amount Paid
1906 ¹	Accepted	52	2,261	46	71	\$15,478.53	5	\$1,124.97	\$77,935	\$16,603.50
	Unaccepted	32		37	70	6,474.53	3	124.98	48,910	6,599.51
1906-7	Accepted	55	2,309	88	70	77,574.09	12	8,039.06	129,855	85,613.15
	Unaccepted	48		55	71.3	47,654.11	4	2,420.00	77,525	50,074.11
1907-8	Accepted	62	2,444 ²	124	70	146,140.47	19	14,989.48	203,290	161,129.95
	Unaccepted	59		66	70.5	80,134.26	10	5,378.20	100,215	85,512.46
1908-9	Accepted	67	2,966 ²	185	69.7	206,472.57	33	24,545.00	313,985	231,017.57
	Unaccepted	62		100	69.3	104,536.66	13	8,316.67	152,335	112,853.33
1909-10	Accepted	71	3,512 ²	138	69.6	291,403.98	40	33,795.04	382,120	325,199.02
	Unaccepted	77		92	70.6	132,497.51	17	12,137.77	138,950	144,635.28
1910-11	Accepted	72	5,025	215	69.5	341,899.16	52	46,720.17	425,105	388,619.33
	Unaccepted	77		85	70.1	122,215.10	21	16,044.57	128,560	138,259.67
1911-12	Accepted	72	5,066	236	69.3	388,338.27	61	53,646.37	478,440	441,984.64
	Unaccepted	68		79	69.7	108,329.55	22	20,045.84	125,415	128,438.39
1912-13	Accepted	73		244	69	416,626.37	67	62,360.77	501,540	478,987.14
	Unaccepted	63		72	69.2	102,814.10	21	18,588.77	116,580	121,402.87

¹ July 1 to September 30.

² Estimated.

TOTAL LOAD OF ALLOWANCES ASSUMED

YEAR	INSTITUTIONS	Age	Service	Perma- nent Dis- ability	Tempo- rary Grants	Widows	Total	Deduct		Net Increase	Annual Load at End of Year
								For Deaths	For Dis- continu- ances		
1906 ¹	Accepted	\$28,545	\$34,915		\$9,975	\$4,500	\$77,935			\$77,935	
	Unaccepted	22,330	20,145		5,600	2,170	50,245	\$1,335		48,910	\$126,845
1906-7	Accepted	36,750	24,435		2,540	6,165	69,890	17,970		\$51,920	
	Unaccepted	11,040	23,355		3,370	500	38,265	9,650		28,615	207,380
1907-8	Accepted	28,200	27,450		9,600	8,675	73,925	4,480	\$800	\$68,845	
	Unaccepted	14,785	14,975		6,000	4,080	39,840	11,800	960	27,080	303,305
1908-9	Accepted	47,855	46,490		12,485	11,700	118,530	7,685		\$110,845	
	Unaccepted	20,540	30,500		5,100	2,220	58,360	6,190	1,500	52,170	466,320
1909-10	Accepted	56,315	12,820	\$2,515	7,000	7,025	85,675	17,830	19,370	\$48,475	
	Unaccepted	16,970		720	2,400	5,060	25,150	14,975	3,900	6,275	521,070
1910-11	Accepted	40,515		8,380	1,800	12,250	62,945	26,815	2,360	\$33,770	
	Unaccepted		3,010		1,000	2,955	6,965	3,920	4,220	1,175 ²	553,665
1911-12	Accepted	58,185		4,375		10,705	73,265	16,930	3,000	\$53,335	
	Unaccepted	5,600				3,000	8,600	10,745	1,000	3,145 ²	603,855
1912-13	Accepted	43,575				6,810	50,385	27,180	280	\$22,975	
	Unaccepted	4,200				600	4,800	15,160		10,360 ²	616,470

¹ July 1 to September 30.

² Decrease.

ADMISSION OF THE RENSSELAER POLYTECHNIC INSTITUTE

DURING the past year the Rensselaer Polytechnic Institute was admitted to the list of the institutions that are associated with the Foundation. This action of the executive committee was the outcome of negotiations and correspondence that began almost with the establishment of the Foundation. The Institute was not included in the first list of institutions admitted to the privileges of the Foundation for the reason that, notwithstanding its high standards of graduation, it had followed a practice similar to that formerly in use at the University of Virginia, of not exacting the entrance requirements usually enforced by similar institutions, but trusting to the rigid enforcement of class-room work for the exclusion of students inadequately prepared. The trustees of the Institute, however, announced new entrance requirements, which went into operation with the year 1910. These entrance requirements have now been fully tested, and are in full operation, and, in accordance with the somewhat informal agreement made at the inauguration of the Foundation, the executive committee took up at this time the long-deferred application of the Institute and granted it in accordance with the terms of the original correspondence.

The evolution of the Rensselaer Polytechnic Institute from the original idea involved in its foundation illustrates in so interesting a way the processes by which our institutions of learning have come to conform themselves so completely to certain types that some account of this process may be of interest,—particularly in the case of an institution that, as American scientific schools go, is an old one.

The counties in which the cities of Albany and Troy are situated lie in the extensive territory formerly acquired from the Indians under the authority of the Dutch West India Company by Kilian Van Rensselaer, who became the patroon, or feudal lord, of this region. The seventh patroon was Stephen Van Rensselaer, a graduate of Harvard College in the class of 1782. During his entire life he was almost constantly in the public service. He ranks with De Witt Clinton as one of the creators of the Erie Canal, and he became the founder of the Rensselaer Polytechnic Institute.

In 1824 Mr. Van Rensselaer secured certain property in the city of Troy and instituted a school intended to bring his poorer neighbors into practical touch with mechanical and scientific knowledge. His ideas were most definite, and they are set forth in a letter to the future board of trustees. His aim was not to found "a single public institution for the resort of those only whose parents are able and willing to send their children from home," but to create a school whose principal object should be the training of teachers to go through the rural schools and amongst the population generally in order to teach, by lectures and experiments, the uses to which some knowledge of science could be put in agriculture and in manufacturing. It is interesting that to-day this idea is again coming into practical consideration.

The distinctive method of the new institution lay in the fact that the teaching was to be done by students. The professors were merely to guide. Thus, in the pre-

scribed daily routine the daily assistant (a post filled by the students in rotation) gave a lecture before all the students in the presence of a professor. This lecture and the experimental illustrations that accompanied it were publicly criticized by the other students. The students then separated into two divisions, before each of which a sub-assistant of the day gave lectures in the presence of a professor or assistant professor. These lectures also were subject to student criticism. Each division then divided itself again, in correspondence to the four departments thru which the student passed in rotation, and before each of which all of the students of that department lectured. This brought the school to the hour of midday dinner. After that meal the departments went to their respective laboratories to prepare for the experiments and demonstrations of the next day. This work was generally ended by four o'clock, and the students at that hour met in the reading-room to receive directions for the "afternoon amusements," which consisted of visits to workshops and factories, or to the fields to collect plants. Friday evenings and alternate Saturdays were devoted to debating and other parliamentary exercises. Every other Saturday afternoon the students were given their liberty.

A fundamental rule of the school was that the student was always to begin with the practical application of a branch of learning, and was to learn the elementary principles only as his progress made a knowledge of these principles necessary.

The school was opened on January 3, 1825, the board of trustees having adopted in a formal set of rules the two letters in which Mr. Van Rensselaer set forth the above principles. One of the instructions contained in these letters is of especial interest: "That, with the consent of the proprietors, a number of well cultivated farms and workshops in the vicinity of the school be selected as places of scholastic exercise for students, where the application of the sciences may be most conveniently taught." There were separate day, afternoon, and evening classes, the members of the afternoon class being required to have attended "one or more courses of lectures on chemistry at some public institution," the members of the evening classes attending only on lectures and receiving merely certificates of attendance.

The legislature of New York, on March 21, 1826, incorporated the institution under the title of "The Rensselaer School." The preamble set forth that Mr. Van Rensselaer had provided libraries, instruments, and laboratories for the applications of science to "agriculture, domestic economy, and the arts." The trustees were given authority appropriate "for conferring on students such honors as they may judge proper, having relation to the object of said school." The trustees instituted the degree of bachelor of arts in Rensselaer School, expressed in the fashion A.B. (r. s.).

Four years' operation seemed to have demonstrated the feasibility of the methods used at the school, and even induced the trustees to adopt provisional plans for the establishment of district branches in any part of the state, for the more definite training of teachers for the New York public schools, and for the education of women, the latter on plans that were somewhat advanced for those days. But the payment by

the founder of half the expenses of the school had become burdensome to him, and he signified to the trustees his desire to discontinue this, and especially the free education of the country students. In the year 1829-30 the trustees temporarily turned over the financial operations of the institution to the senior professor, Amos Eaton, as "agent," he to give up his professorial stipend, but to receive and expend all moneys at his discretion, and to retain the profits for his personal use.

In 1835, upon the application of the trustees, the legislature granted them the power to establish "a department of mathematical arts, for the purpose of giving instruction in engineering and technology." In doing so the trustees substituted for the degree of bachelor of arts the degree of bachelor of natural science (B.N.S.), the graduates of the department of mathematical arts to receive the degree of civil engineer. This is believed to have been the first school of civil engineering, as distinguished from military engineering, in any English-speaking community. Henceforth the trade instruction contemplated at the time of the foundation of the institution fell into the background; the instruction in agriculture, so prominent in all the early documents, had never been carried into effect.

Amos Eaton died in 1842, and the Rensselaer Institute, its name having been changed by the legislature in 1837, was confided in 1846 to the direction of B. Franklin Greene, a graduate of four years previous. Professor Greene completely reorganized the Institute, which at this time inserted the word "polytechnic" in its title. The trustees resolved that "their field should be narrowed and more thoroughly cultivated," that is, that the educational objects should be restricted definitely to architecture and engineering. The course was changed from a single year of "a somewhat irregular and for the most part optional" nature, to "a carefully considered curriculum which should require at the least three full years of systematic and thorough training." In the meantime, on account of lack of resources, work in the specialties of architecture and mining engineering was postponed, and the energy of the institution was bent upon the development of the so-called general course, "the common scientific basis of the four professional courses," and of "the two specialties of civil and topographical engineering." While the civil engineering course was established at three years, the course in natural science, with the degree of bachelor of science, was fixed at two. The method of instruction, by which the students every day in small sections delivered extemporaneous lectures, followed by criticism from their companions, was retained. This relic of the early plan of the institution was, however, gradually dropped, and shortly after the middle of the century, disappeared. In 1860 the courses in general science and topographical engineering were increased in length to three years.

From this time on the Institute became essentially a school of civil engineering. Within the last few years, with increased endowment and resources, it has given courses in electrical and mechanical engineering as well. Started primarily to serve farmers and mechanics, and designed upon a plan under which the simpler applica-

tions of science would be brought to the every-day lives of these working-people who could not go away from home, the institution—following the tendency of American schools—has developed into a school of applied science not intended for the farmer or for the mechanic or for the man who cannot pay, but intended to furnish a course in scientific training to those already possessed of a fair preparatory education. However important such a development is, the fact still remains that the idea that Van Rensselaer had is one of fruitful significance, and that to-day there is more need, perhaps, for facilities by which elementary instruction in the processes of applied science shall be given to the great mass of people than that facilities should be increased for those who desire to become technical engineers.

The growth of the institution has developed in recent years with the extension of its courses. To the former course in general science and in civil engineering there were added in 1907 courses in mechanical and electrical engineering. All of the courses are now four years in length. The faculty of the institution is large in proportion to the student body, as compared with conditions in similar institutions. Situated in the midst of a great manufacturing region, the institution is able to prepare men for industries that are in large measure the basis of subsistence for the surrounding population. The trustees of the Carnegie Foundation are pleased to welcome into the list of its associated institutions one that has had the long and honorable history of the oldest of American engineering schools.

THE DIVISION OF EDUCATIONAL ENQUIRY

By far the most significant and important event of the year in the history of the Foundation is the establishment of a distinct department of its work, to be known as the Division of Educational Enquiry. This has been rendered possible by the action of Mr. Andrew Carnegie, who, on the part of the Carnegie Corporation of New York, addressed to the trustees of the Carnegie Foundation, on January 31, 1913, the following letter:

GENTLEMEN:

Appreciating the valuable results of the educational studies of the Foundation, and being of opinion that it is desirable that a fund be established to secure such results and conduct such investigations as may aid you in your work, and realizing that sufficient income may not now be available for that purpose, I hereby offer to the Foundation the sum of one million and a quarter dollars four (4) per cent bonds, to be held and used by the Foundation upon the following terms:

I. There shall be organized in the Foundation an agency for the study of education and educational institutions, to be designated the Division of Educational Enquiry.

II. Any endowment or funds conveyed to the Foundation for the use of such

Division shall constitute and be held as a special fund and the income alone be used, and shall be accounted for separately from the general funds of the Foundation and shall be devoted to the purposes hereinafter named.

III. It shall be the function of the Division of Educational Enquiry to conduct studies and to make investigations concerning universities, colleges, professional schools, and systems of education generally, to investigate problems of education affecting the improvement of educational methods, the advancement of teaching, or betterment of educational standards, and in general to investigate and to report upon those educational agencies which undertake to deal with the intellectual, social, and moral progress of mankind, and to publish such results as the trustees may consider of value.

IV. The income of the Division of Educational Enquiry shall be used in the expenses incident to the performance of the work of the Division of Educational Enquiry as hereinbefore set forth, as may from time to time be undertaken and published by the Foundation, but no part of the income of the fund or funds specifically given for the use of this Division, shall be used in the payment of pensions.

It is my purpose to aid the trustees of the Foundation to conduct their work upon broad lines, and to enable them to obtain such information as will make the whole endowment of the Foundation of the greatest possible service to mankind.

Yours truly,

(Signed) ANDREW CARNEGIE,
President.

All of the trustees except one, who was in Athens as Minister of the United States to Greece, were able to notify the executive committee by letter before its next meeting of their hearty approval of this gift, and of their desire for its acceptance. The executive committee, on February 11, 1913, therefore adopted the following resolution:

"Resolved, That the executive committee, acting upon the unanimous expression of the trustees of the Foundation, accept with the highest appreciation the timely gift of Mr. Carnegie for the endowment of a Division of Educational Enquiry, and the committee desires to express its satisfaction in the form which this endowment has taken and to assure Mr. Carnegie of the desire of the trustees to administer this splendid endowment in the most fruitful manner."

This resolution was communicated to Mr. Carnegie, who thereupon caused \$1,250,000 in four per cent bonds to be transferred to the Foundation for the Division of Educational Enquiry.

This endowment for the distinctively educational function of the Foundation comes as the culmination of its work during the last seven years. When in April, 1905, Mr. Carnegie placed in the hands of twenty-five trustees a fund to provide pensions for college teachers in English-speaking North America, he stipulated that the disbursement was to be made "under such conditions as you may from time to time adopt."

Before the trustees moved to procure a charter, however, it became evident that

the agency thus created must, in order to fulfil its true function of a pension agency, become at the same time an active educational agency. The benefits of the pensions derived from the endowment were, under the conditions of the gift, not available for all teachers. They were, in the first place, available only for teachers in the institutions genuinely engaged in the work of higher education, — universities, colleges, and technical schools of college grade. The officers of the Foundation were called upon to consider the application of these terms to hundreds of institutions in the United States and Canada bearing the name “college” or “university.”

In addition, the restriction contained in the Foundation’s charter relative to denominational control entailed a thoroughgoing study into the legal relationship of collegiate institutions with other organizations. From the very character, therefore, of the gift itself, the trustees were compelled, in order to carry out their full duty in the distribution of pensions, to make thoroughgoing studies of the educational conditions of the institutions with which they dealt.

The charter that was procured, therefore, was made so broad as to include within the scope of the Foundation’s work any educational enquiry that might be deemed by the trustees necessary or advisable. The functions of the Foundation were by its charter made broad enough to include the study of education at every point where it might affect the higher institutions of learning.

It very soon became evident that these studies could not be confined to the ordinary colleges, to undergraduate work, or even to secondary schools directly connected with the colleges. American educational institutions are, as a rule, very complex. At the heart of them stands usually the traditional college, but in very many cases there are associated with these colleges professional schools, — sometimes of college rank, sometimes of very elementary character. From the fact that the Foundation was necessarily interested in higher education, it followed that it could not be indifferent to professional education, and that some criteria must be found for judging what teachers in professional schools, if any, were entitled to retire on the fund.

In a word, early in the history of the Foundation it became evident that a prolonged study of professional education, of college and university conditions, of the secondary schools and their relations to colleges, was a necessary part of the work of the Foundation in order to enable it to administer the pension fund confided to its charge. Accordingly, many such studies have been undertaken, and a number of bulletins have been published dealing with various phases of undergraduate and professional work. One of these bulletins dealt with the financial status of the teacher, another with the general financial organization of educational institutions. The matter of college entrance requirements has received a large amount of attention. Bulletins dealing with medical education have been published. At the present time the Foundation has under way a comprehensive study of legal education and of admission to the bar throughout the United States. The relations of the agricultural colleges to the general educational system of the country have called forth a similar study of these prob-

lems. In carrying out these studies the Foundation has merely exercised the function specifically granted to it under its charter,—performing the work of an educational agency as well as that of a pensioning agency.

In the seven years of its history it has become clear, both to the founder himself and to the trustees, that this study of education from a national point of view is not only an integral part of the intelligent administration of the pension system, but that it also has a real value for education itself,—a value that depends, to a considerable degree, upon the point of view of the Foundation. No one contends that a group of men organizing themselves into such an agency is wiser than other groups of men. It will, however, generally be admitted that an organization freed from the local interests that affect all educational institutions—having to serve neither an institution, nor a state, nor a denomination—has at least some advantages in dealing with education as a national force. The experience of these seven years has led the founder of the institution and the trustees to believe that this function will always be a useful one, and that there is a distinct advantage to American education in an agency whose point of view was that which has been maintained by the Foundation.

Hitherto all expenses for such educational studies have been borne from the income of the general endowment of the Foundation, a matter entirely in accordance with the legal powers of the trustees and in accordance with the charter under which the trustees work. Such studies, however, if they are well done, are expensive. They involve the time of men who ought to be fairly paid; they involve a large amount of travel and careful study of conditions in the field. For all of these reasons, therefore, it has seemed desirable to the officers and trustees of the Foundation that an endowment should be provided under which such studies might be prosecuted without making any demand upon the funds that are devoted directly to the payment of pensions. The transfer of this special endowment by Mr. Carnegie, acting as the president of the Carnegie Corporation, testifies to his conviction of the desirability of rendering secure and permanent this educational function of the Foundation.

While the trustees have accepted this new endowment and its responsibility, they have as yet held no meeting since its establishment. At the next annual meeting they will be asked to enter upon a definite consideration of the policy and the work of this new division.

The experience of the Foundation in the making of such studies during these seven years makes clear at least one or two fundamental facts concerning such enquiries. Surveys, as they have very aptly come to be called, have become quite common in social, political, and educational relations. The educational survey is just at this time the popular and widely recommended remedy for our educational weaknesses.

The experience of the Foundation goes to show that such studies, to be of any great value, are far more expensive and require far more time than has ordinarily been given to them. The two studies of medical education published by the Foundation consumed about three years and, with the expenses of publication, cost \$57,500.

The study of legal education has been under way for the better part of the year, and will require at least two years to complete satisfactorily. A thoroughgoing investigation of the educational conditions of an institution or of a city or of a state is, in the first place, an expensive process. In the second place, the experience of the Foundation goes to show that not only do the element of cost and the element of time play large rôles in the value of such a work, but it is also very clear that the number of men prepared to undertake the work of educational scrutiny and criticism is extremely limited. Education is perhaps the most complex field of civilized endeavor. The complexity in America is far greater than in any other country. The idea that young and untrained minds can enter upon such work without a background of experience, of educational training, of educational perspective, and in a few weeks or months bring about a result that shall serve to guide those responsible for educational organization, is an assumption wholly unwarranted. The educational problems of a city or of a state are so great, so complex, so intertwined with all social and industrial relations, that the wisest and best trained men may well hesitate to undertake their solution. If real results are to flow from such studies, they must come as the studies of sober, able, experienced men, who give the necessary time and thought to the work that they are called upon to do.

Another fact that may be fairly adduced from the experience of the Foundation is that to undertake such a study with the help of the casual time that even an able professor can give from his university duties is to invite a superficial and fruitless outcome. No professor of education, however well he may know the ground, can, by giving the *rag-ends* of his time, work out the problems of a city or a commonwealth. These problems are worthy of the best thought and the full time of our best men.

For many reasons an educational study, or, as it has come to be called, an educational survey, to be fruitful must be patient; it must be thoroughgoing, and there must be enough time given after the material is collected to digest it and to put it before the public, and before those responsible for educational administration, in such form that it will be understood and appreciated. All of this means that an educational study carried out in this way, taking the time of the best men, giving full opportunity for the knowledge, appreciation, and criticism of the local conditions, must in the nature of the case be an expensive and time-consuming process.

On the other hand, when such surveys have been attempted in the past, the demands have usually been so framed as to call for a quick and ready-made report. Such enquiries usually arise out of some emergency that makes a quick and instant popular demand, — a demand oftentimes fed by well-meaning, but not always intelligent newspaper criticisms. It is not out of such conditions that sane and trustworthy results are to be obtained. The only educational study that, in the long run, a state or a city can afford to adopt requires time and thought and patience and the best brains of the educational world.

Whatever, therefore, may be the problems taken up by the newly established division, I wish to recommend the appreciation on the part of the trustees that such enquiries, in order to accomplish their objects, must be both slow and costly, and that it is far wiser to make one thoroughgoing, complete, and satisfactory study than to make many superficial and hasty studies. I am persuaded also that very much of the value of such an agency lies in its permanent and continuing character, and in the fact that, going on as it does from year to year and from decade to decade, it deals with a problem not as of one moment, but thru the varying phases of its history. The Foundation's work in the study of medical education is, I feel, a fair illustration of this process. It has published at the end of some years of study preliminary volumes on medical education, but from year to year the progress that has been made will be reviewed. We shall hope for the next generation to keep in close touch with this problem. The conceptions of those who direct the Foundation will be cleared and made more practical as time goes on, and the advantage that will come to the profession of medicine and to the teaching of medicine will in very great measure lie not in a single preliminary report, but in the fact that an agency which is patient, which has the leisure and the opportunity to study, and—whatever its faults may be—is at least free from local interests and local complications, is dealing thru the years with the varying, developing, and improving phases of the subject. I believe that to carry forward a few such continuing studies is a larger contribution to education than to make superficial studies of every state and of every region.

THE CARNEGIE CORPORATION OF NEW YORK

THE endowment of the Division of Educational Enquiry by the gift of a million and a quarter dollars in four per cent bonds comes from the income of the Carnegie Corporation of New York, and it will be noted that the letter of gift printed in the preceding section is signed by Mr. Carnegie as president of that corporation. Altho the charter of the corporation was granted by an act of the legislature of New York some two and a half years ago, and statements of its resources and purposes have appeared in the daily papers, these references have been fragmentary. A brief account of the purpose of the corporation, its resources, and its relations to the other institutions founded by Mr. Carnegie may therefore be of interest.

The official name of the corporation is that given above,—the Carnegie Corporation of New York. Its charter is of the most liberal character. The purposes of the corporation are stated in very broad terms to be the holding of a fund or funds, the income of which is to be used in aiding institutions of learning, educational agencies, peace endowments, libraries, hero funds, and other agencies that look toward the up-building of men in the United States of America. In his letter of instruction to the trustees the founder directs them in the first place to safeguard the interests of the

five chief institutions that he has founded, the children of his thought and aspiration for his fellow men; and secondly, to use the income for those purposes which in the judgment of the trustees serve the highest aims and ideals of our citizenship. Full power and great liberty of action are given to the trustees.

The five institutions referred to are the Carnegie Institute of Pittsburgh,—embracing the Art Museum, the Museum of Natural History, and the Carnegie Institute of Technology,—the Carnegie Institution of Washington, devoted to scientific research, the Carnegie Foundation for the Advancement of Teaching, the Carnegie Hero Fund, and the Carnegie Endowment for International Peace. To these institutions Mr. Carnegie has already given between eighty and ninety millions of dollars, most of which remains as endowment.

The charter of the Carnegie Corporation provides for eight trustees, of whom five are *ex officio* the presidents of the five institutions named above. This measure was adopted on two grounds. First, because it was believed to furnish a wise method for all time for choosing efficient trustees. These institutions are governed by boards composed in most cases of men drawn from different parts of the country. They are likely to choose presidents upon grounds of character and ability, and they are free, to a certain extent at least, from the local point of view. In the future, in choosing a president of any of these institutions, his fitness for this additional service to the Carnegie Corporation will be considered. Secondly, this method of choosing trustees will keep the five institutions in close touch with the Carnegie Corporation. In order that this relationship shall not be impaired, it is provided in the constitution of the corporation that when any individual ceases to be president of one of the five institutions he ceases *ipso facto* to be a trustee of the Carnegie Corporation of New York. The other three trustees are elected by the board. Mr. Carnegie himself is president of the board.

To this corporation Mr. Carnegie has conveyed one hundred and twenty-five million dollars, par value, in bonds of the highest order of security; and he has made the corporation the residuary legatee of his estate. At the last annual reporting of the treasurer, on September 30, 1913, the corporation held one hundred and twenty-eight million dollars in bonds, yielding an annual income of a little more than six millions of dollars. The corporation is to-day the largest philanthropic agency, so far as resources are concerned, that the world has ever seen. With far-sighted wisdom Mr. Carnegie has given to its board of trustees the greatest possible freedom, enabling it thereby to deal with the changing circumstances that future conditions may disclose. In respect to its freedom of action, its resources, and its relations to the five existing institutions the Carnegie Corporation of New York constitutes a unique agency of civilization.

A STUDY OF EDUCATION IN VERMONT

By a somewhat singular chance there came to the Foundation almost simultaneously with the establishment of the Division of Educational Enquiry, an application for a study of the educational situation in the state of Vermont, which seemed to lie so directly in the line of what was contemplated by this gift that the executive committee authorized the president to undertake and carry out such a study. The request from the authorities of Vermont to the Foundation to make this study seemed so direct and pressing that the executive committee felt that the invitation to undertake the work must be accepted. This official action of the state of Vermont arose out of the following circumstances. Under an act of the legislature of that state approved in November, 1912, an Educational Commission was appointed to report upon its educational problems. The scope of the work of this commission embraced an examination of the whole educational machinery of the state, including the elementary and the secondary schools, the normal schools, and the colleges and institutions of higher learning; and the commission was directed, after causing such an enquiry to be made, to report, by bill or otherwise, such recommendations as will, in the language of the act, promote the ends of unity, harmony, economy, and efficiency. Upon this commission were appointed men of the highest type, the chairman of the commission being Judge John H. Watson of the Supreme Court of the state. At its meeting held on February 24, 1913, the commission adopted a formal resolution calling upon the president of the Carnegie Foundation for the Advancement of Teaching to undertake, with such assistance and coöperation as he might determine to be necessary, an educational survey of the state, to be completed at such time as might be practicable.

This work was begun in March, and since then has claimed not only the larger part of the time of those on the staff of the Foundation, but has occupied as well the time and the energy of others who have been called in to take up various branches of the study. Amongst those who have participated extensively in the work are Professor Edward C. Elliott of the University of Wisconsin, Professor M. B. Hillegas of Columbia University, Dr. William S. Learned, Fellow for Research in Education of Harvard University, Dr. George R. Olshausen, and Professor Edward Farrington.

The gathering of the material occupied, on the whole, some six months, the first part of which was in large measure devoted to observations in the field. About three months were required for the digestion, arrangement, and presentation of the material in final form.¹

It is to be noted in this connection that the function of the Foundation thru its Division of Educational Enquiry consisted, first, in seeking to give to the commission a fair picture of the educational situation. That, in fact, was its chief duty. The commission is charged with the duty of recommending to the state such measures as

¹ The report has been presented to and distributed by the Vermont Educational Commission, and may be obtained from the Foundation on request for the Seventh Bulletin of the Foundation.

its knowledge may indicate as practical and wise. The report, therefore, endeavors in the first place to set forth these conditions, and then to make clear such betterments as, in the judgment of those connected with the study, are possible — leaving, however, to the commission the ultimate responsibility for such recommendations as are to be put into practical effect.

Vermont is a state small in area and in population. It presents, nevertheless, within this compass all of the educational problems with which the greatest of American commonwealths have to deal,—the problems of the rural school, of the training-school for teachers, of competing subsidized colleges, while perhaps more than in any other state population and growth have been affected by the steady draining off of young people to the cities. Every effort has been made by those charged with this work to give to these problems such care and such study as will lead to developments that are at once desirable and feasible. In order to attain that end, the officers of the Foundation charged with the responsibility have sought to avail themselves of every expert who could throw light upon the educational, social, or financial aspects of the problem.

THE STUDY OF LEGAL EDUCATION

THE results of the enquiry into legal education by the Carnegie Foundation, now actively under way, will, it is hoped, complement the Report upon Medical Education in the United States and Canada, as a similarly thoroughgoing study of one of the higher professions. At the outset one must recognize, however, that the differences between medicine and law are more marked than their resemblances. The one is almost certainly a learned profession; the other, under existing conditions, seems to be now a profession and now a trade, according to the point of view of the individual practitioner. Beyond this point of somewhat doubtful similarity there are wide differences between the two. Corresponding to this difference in the nature of the problem, a different method of study is indicated.

The most fundamental distinction between medicine and law, from the purely educational point of view, would seem to be the different weight attached, in practice, to the possession of an academic diploma, representing, or supposed to represent, a certain degree of professional learning. There is virtually unanimous agreement that a physician must be a "doctor," with the right to attach M.D. to his name; that, in other words, he must give evidence of training in some more or less reputable school of medicine. The presumption is strong that graduates of the better schools possess the qualifications needed for the practice of their profession. The presumption is strong that graduates of inferior schools, or of no school at all, do not possess these qualifications. The work of the state medical boards, in issuing licenses to practice, is thus largely subordinate to the work done by the schools in professional preparation.

In the legal profession, on the other hand, the situation is reversed, at least in the popular estimation. In no state is graduation from a law school a *sine qua non* for admission to practice. The letters LL.B. do not serve to attract clients. Admission to the bar is the one and only criterion that distinguishes a lawyer from a layman; and to the standards set up by courts or examining boards law schools must therefore to some extent conform, unless they wish—as few of them do—to prepare only legal scholars. While it is doubtless true that law schools and examining boards each react upon the other, and that the existence of good schools permits and encourages the raising of standards of admission to the bar, at the same time that raised standards of admission permit better schools to develop, the latter influence is decidedly the more potent of the two. An enquiry into legal education that failed to include a detailed study of the varying systems of admission to the bars of the several states, would promise little of practical value.

There are thus indicated, at the outset, two main divisions for the enquiry. In the first division, which has reference to the methods of admission to the bar, a preliminary survey has already been made of the systems in force, so far as this can be done by reference to statutes, rules of court, or other published material. Upon the basis of the information thus gained, printed forms have been prepared, and the Union has been divided into sections of from one to six states, within which individual investigators are now engaged in securing all available information. The dominating ideas in this branch of the enquiry are two. First, that it is futile to indorse one system as good and to stigmatize another as bad, unless we can discover how the two systems actually work in practice. Second, that published material, by itself, is quite inadequate to the furnishing of this information. Owing to defective systems of records, the task of these field workers is beset with many difficulties, but it is hoped that sufficient can be accomplished to provide a basis for fairly definite conclusions.

For the other main branch of the enquiry—the studying of law schools—a somewhat elaborate question blank has been prepared, and dispatched to all schools in the United States and Canada. The replies to these blanks, combined with the information to be gleaned from a study of catalogues and special bulletins, provide a working basis for the study, but, as in the case of standards for admission to the bar, all such information is defective unless reinforced by personal enquiry. For the purpose of insuring a unified point of view, it has seemed best to confide this part of the work to a single member of the staff, rather than to several workers. The somewhat exacting office work necessarily involved in an enquiry of this magnitude has made it impossible for him to begin his visits before the current academic year. This part of the work has now been started, however, and will be prosecuted with such expedition as full justice to the schools will permit.

Supplementary to these two main divisions of the enquiry, I hope to include in the published report a few discussions, by leading authorities, of special topics of particular interest. One such topic is the value of the method of instruction originated

by the late Dean Langdell of Harvard, usually known as the "case-system." The reputation secured by the Harvard Law School during Langdell's incumbency, and the eventual introduction of his system, in more or less modified form, into many schools, has created a presumption, which in the minds of many eminent legal educators has been resolved into a certainty, that this system, or one closely approximating it, provides the only proper method of legal instruction. On the other hand, after over forty years' experience of the case-system, criticism of it still exists; nor is this criticism by any means confined to those who, being themselves the products of other methods, may be said to be ignorant of its real nature. The question would still seem to be fairly debatable, and, like the question of the competency of night schools, or of unendowed day schools, to give instruction equal to that provided by the great universities, is a point upon which the Foundation will form no judgment until both sides have been thoroughly canvassed, and relevant facts secured and carefully studied. In special reference to the case-system, we have been fortunate in securing the coöperation of Professor Josef Redlich of Vienna, whose monumental work upon the English House of Commons has earned an international reputation. Professor Redlich has come to the United States for the purpose of visiting several schools of widely varying types, and will give the judgment of an entirely unbiased observer as to the comparative value of their methods.

In order that our enquiry may have its fullest value, it should be conducted with the hearty coöperation of all concerned. Those whom we ask to coöperate with us are entitled to a knowledge of what we are doing, and it is for this reason that I have explained our plans in some detail. In the same spirit I wish to comment upon some of the minor obstacles that confront us.

In the first place, denominational susceptibilities seem in certain cases to have been aroused. Many schools under the control of religious bodies have responded to our enquiries with the greatest cordiality and apparent appreciation of our aims. One such school, however, has definitely refused information, on the ground that it is excluded from the financial benefits of the Foundation's system of pensions. In still other schools, from which no response thus far has been received, it may be conjectured that a similar impression exists, varying from the feeling that the Foundation is interfering in a matter beyond its concern, to the conviction that it is an anti-Christian agency. Our policy toward all such schools is to endeavor, by personal interviews, to dispel this misunderstanding of our aims. When we are unsuccessful in this endeavor, nothing will remain but to give such description of the school as may be gleaned from its official publications, with the statement that further information has been refused. I cannot but feel, however, that coöperation on the basis of a mutual understanding of each other's ideals would provide a more satisfactory solution of this difficulty, both as contributing to the greater comprehensiveness of the enquiry, and as aiding the public to realize the work of the many schools which, whether denominational or not, are doing faithful work in secular education.

It ought not to be necessary to restate the Foundation's policy with regard to denominational institutions. Schools, the relation of which to an ecclesiastical organization is one of sympathy and tradition, are admitted to its financial benefits on the same basis as other schools. Several such institutions are now on its list. I have suggested that, apart from any supposed financial advantage to be gained by a change of charter, there might be educational advantages in the substitution of this fluid control for the fixed lines of charter restrictions. But I have also most clearly stated my respect for those institutions whose sincerity of purpose leads them to retain formal denominational control. Time has not caused me to change the views I expressed in the First Annual Report:

"Many institutions will prefer to [provide their own system of retiring allowances,] however difficult the process may be, rather than accept an educational policy which in the judgment of its faculty is undesirable, or to surrender a connection which ministers to its spiritual and intellectual growth. In all such questions the institution must be the judge of its own best policy."

And again in my Second Annual Report:

"Primarily the college authorities ought to face fairly the question, 'What does our denominational connection mean to us?' If it means a real gain to the spiritual and intellectual life of the college, or if its obligation means the abandonment of obligations assumed in good faith, the enquiry can go no further. No gain in college support can compensate for a loss of college sincerity. Even when these reasons do not exist, the traditions and aspirations of a religious body are so interwoven with the life of certain colleges that those in control may well hesitate to take such a step."

The Division of Educational Enquiry has no concern with denominational considerations as such. Its purpose is to study the educational product, whatever be its source. It has no power to extirpate denominational education, even if it had the desire, and would hurt its own reputation far more seriously than that of any school if it distorted facts to prove a preconceived thesis. It asks those denominations that feel that their law schools give instruction equal to or better than that provided by the majority of purely secular schools, to open their doors to an unprejudiced enquirer.

A second mistaken idea with which we may possibly have to contend is a feeling, on the part of some of the smaller schools, that the Foundation attaches too great importance to the possession of financial resources as such, and is not sufficiently sympathetic with those groups of earnest men who are struggling, under conceded difficulties, to realize ideals. This feeling again, if it exists, is based upon an entire misconception. Other things being equal, all will agree that a school with large resources can provide more comprehensive training than one that is financially embarrassed. Other things rarely are equal, however, and an overpaid faculty, giving perfunctory

instruction in an expensive plant, is at least a possible phenomenon. The costly laboratories needed by a medical school are not requisite for law. Books seem essential, but even this requirement may sometimes, in large cities, be met by securing access to a state or county collection. In no other branch of professional education, except the ministry, does the individual instructor count for so much, his material equipment for so little, as in the law. We ask the sincere worker in the smaller schools to recognize that our purpose is far less to expose the occasional impostor, who in the nature of things cannot be expected to respond cordially to our enquiries, than it is to assist good men, in large and small schools alike, to profit by one another's experience.

A word should be said in conclusion as to the relation that this enquiry bears to the legal profession. Legal education is a topic which, in the cross-hatch classification of human activities, belongs within two fields. It is clearly a division of law, and properly to be discussed accordingly by lawyers. With equal clearness it finds its place in the field of educational enquiry, and thus demands consideration by any agency that aims to make a comprehensive survey of American education. No such enquiry can be really fruitful, it is true, unless it is conducted with the fullest coöperation on the part of the legal fraternity. This coöperation has been the basis of our enquiry. The committee on Legal Education and Admissions to the Bar of the American Bar Association formally invited the Foundation to make this investigation. Those parts of the enquiry that demand technical legal training are being conducted by law school incumbents or by practicing attorneys. Lawyers of national reputation will assist us in deducing pertinent conclusions from the collected facts. This is not, however, primarily an auto-investigation directed by lawyers upon themselves, or by members of law schools upon their own institutions; and in this fact lies, perhaps, its chief promise of usefulness. It is a thoroughly independent survey conducted by an organization that sees in the legal profession an extremely important part, but none the less a subordinate part, of the American community. The Foundation possesses no peculiar mandate to represent the community in this matter, nor can its dicta carry greater weight than the arguments by which they are supported. Such a survey, however, deserves well to be made, and in the absence of other available agency, the Foundation has taken up the task. To whatever conclusions our enquiry may lead, I ask that it be regarded as at least conceived in a spirit of public service.

THE DECREASING LIST OF MEDICAL SCHOOLS

THE progress in medical education during the past year in the direction of the improvement of the stronger medical schools has been most encouraging. This progress has taken the form generally of better hospital relations, better equipped laboratories, full-time professors, and the addition of teachers dealing with particular phases of

medical education. The Yale Medical School has secured a most desirable arrangement under which it has the entire control for teaching purposes of the New Haven Hospital. Fordham University Medical School has called to its head a dean of high medical standing, and has furnished additional facilities for laboratory and hospital work. In the south, where medical schools of the stronger type are greatly needed, Johns Hopkins University has received a gift of \$1,500,000 from the General Education Board, and the Vanderbilt University Medical School has been strengthened by a gift of \$1,000,000 from Mr. Andrew Carnegie on behalf of the Carnegie Corporation. The magnificent enterprise of the Washington University Medical School at St. Louis has gone forward with the completion of its full list of hospitals and with the working out of a hospital arrangement of the most modern and desirable type. The School of Medicine of Western Reserve University has strengthened its position by raising an endowment of a million dollars. The medical school at Cincinnati has greatly increased its hospital facilities, and has made an earnest effort to increase its resources. In all sections a movement is noticeable looking toward the strengthening of the medical schools in the direction of better teaching, better clinical facilities, right relations with hospitals, and the employment in increasing measure of professors of clinical medicine and of surgery who are primarily devoted to their chairs rather than to the work of a practitioner. All these marks of progress are most gratifying. Not less gratifying is the steady diminution in the number of inferior medical schools, of which the number still remains far too great. In 1910 there were 162 medical schools in the country. There are at present 115, a decrease of 47. The work done by the Council on Education of the American Medical Association has been most noteworthy, both in the direction of strengthening the good schools and in making impossible the inferior and unnecessary schools.

The Council on Education thru its officers now grades its schools in four classes: Class A +, which are considered acceptable medical schools; Class A, which are colleges lacking in certain respects, but in the main acceptable; Class B, colleges needing general improvements to a considerable extent before they can be considered acceptable institutions; and finally Class C, among which are reckoned those that would require complete reorganization and the furnishing of a very large increase in income in order to do the work of even a respectable medical school. Colleges in the last class are not recognized by the licensing boards of twenty-four states. The 115 graded colleges are now distributed as follows: in Class A +, 24; in Class A, 39; in Class B, 23; in Class C, 29. A more concise description of these four grades of colleges would be: Class A + represents the modern type of college; Class A represents the well-meaning college that has not as yet acquired the facilities for presenting a medical education of the best type; Class B includes as a rule colleges which are entirely too weak to offer such a medical education as the student of to-day should receive; while Class C includes colleges so inefficient that they would not be tolerated in any other country. Of this last group three are in California, three are in Illinois,

five in Missouri, two in New York, two in Tennessee, two in North Carolina, two in Wisconsin, and two in Texas.

The 1913 report of the Council on Medical Education announces its requirement, beginning with 1914, of one year of college work for entrance to all of the first two grades of colleges. About thirty-two schools now require two or more such years and six have arranged to do so, while twenty-four others require one year and seventeen have agreed to do so. Twelve state boards require more than high school graduation for admission to medical study. In twenty-seven states of the Union admission to medical schools is now a matter of state control thru the state medical board.

SUPPLEMENTARY PENSION SYSTEMS MAINTAINED BY ASSOCIATED COLLEGES

SEVERAL of the institutions associated with the Carnegie Foundation — California, Columbia, Cornell, Harvard, McGill, Toronto, Williams, and Yale— had instituted pension systems of varying scope and types before they were invited by the trustees of the Foundation to participate in the retiring allowance system maintained by them. As the rules of the Foundation do not apply to those whose service ceased prior to the founder's letter of gift, it was necessary for these associated colleges to continue from their own funds the payments of the pensions that they had previously granted.

Several of the colleges have also continued their previous pension systems as supplementary or alternative to the system maintained by the Foundation. A description of these pension plans is not only of interest, but suggests some important questions.

The pension plan of Harvard University was adopted by the president and fellows on March 27, 1899. The university carried the entire cost, and the benefits were available to any teacher of professorial rank of any grade, or an administrative officer of equal degree, who had served as such during twenty years and attained the age of sixty years, the benefit to be twenty-sixtieths of his latest salary, with an addition of one-sixtieth for each additional year of service above twenty, with a maximum of forty-sixtieths. The president and fellows could, at their discretion, count as additional years those served in positions below the rank of assistant professor, and they might add theoretical years of service, not exceeding ten, to a teacher entering the service of the university as a professor at an unusually advanced age, so that he might thereby retire when his service, including this theoretical period, equaled twenty years.

There was no provision for widows and orphans in the Harvard plan, and the provision against disability before the age of sixty rested in the discretion of the president and fellows. A professor entitled to a pension might, with the consent of the president and fellows, give up a part of his work and a corresponding part of

his salary and receive a pension proportioned to the amount of salary relinquished, and upon his full retirement he would receive a pension based upon the last salary received during his period of complete activity.

The president and fellows retained the power to alter the rules, but not so as to abridge "the rights which individuals in the service of the university shall have acquired under them."

The relation of the pension system of Harvard University to the retiring allowance system of the Carnegie Foundation was defined by a vote of the president and fellows on October 28, 1907, to the effect that the provisions of the Foundation would "contribute toward the support of the system of retiring allowances previously established by Harvard University." The pension was to be based upon the computation most favorable to the beneficiary, the obligation of the university, however, to be limited to the amount determined by its rules.

From this vote it would appear that a professor at Harvard has the option of retiring at sixty years of age, after twenty years' service, upon a pension furnished by the university, or of retiring at sixty-five, after fifteen years' service, upon a pension from the Foundation. If he has had twenty-five years of service at sixty, he can retire upon the university until he is sixty-five, when the pension will be transferred to the charge of the Foundation. Whenever the amount of the allowance of the Foundation is less than that promised by the university, the university pays the difference. If a professor has a wife, it would seem to be inadvisable for him to retire at sixty upon the university allowance, as his widow would thus be left unprovided for, unless he had served twenty-five years, when her case would fall within the rule of the Foundation.

The pension system of Cornell University is a voluntary contributory one. Two years before Mr. Carnegie's letter of gift, that is, in 1903, an anonymous donor gave to Cornell \$150,000, with the requirement that it be put out at compound interest until 1914. All full professors of the university, excluding the medical school and "state or national institutions at Ithaca or elsewhere for which Cornell University is responsible," but including the librarian of the university, are invited to join the fund, the contributions to be graduated according to the age at which contribution begins. Of about seventy-seven professors eligible, fifty-one have elected to contribute. The pensions are available at sixty-five, and are to begin at \$750 a year. All contributions, with three per cent interest compounded semi-annually, are to be returned to a professor or his estate in the event of resignation, removal, or death, and any balance is to be returned to a beneficiary's estate in case his total pension receipts are less than his total contributions, with interest so compounded. The board of trustees of the university reserves the right to alter the rules in any way, and even to terminate the right to a prospective pensioner, but always with return of contributions as above. With the year 1914, full professors at Cornell who have elected to contribute will thus be able to retire upon both the Foundation allowance and the allowance of this

special fund, of which their own contributions have furnished one-fourth of the amount of the pension.

Williams College has a supplementary pension system, instituted about 1906. A professor who has attained the age of sixty-five, and who has been in the service of the college for twenty-five years, is entitled to retire upon an annuity equal to one-half of his terminal salary, with a maximum, unless especially increased by a vote of two-thirds of the trustees of the college, of \$1500. At the age of sixty-eight, every professor must retire automatically, unless specifically requested by the trustees to remain, and this request cannot cover more than two additional years. A professor at Williams College can thus retire on a combined pension from the Foundation and the college, which may, and in some cases does, aggregate more than his active salary.

The University of California had a pension system before it became associated with the Foundation. This system continues as a supplement to the benefits received thru the Foundation, but it is confined to the simple provision that a professor sixty-five years of age, who has been twenty years in the service of the university, has his total retiring allowance brought up to two-thirds of his average salary for the last five years of service.

Columbia University, before the establishment of the Carnegie Foundation, gave to a professor of sixty-five years of age, who had served fifteen years, a pension of half his terminal salary. This system has been superseded by the association with the Foundation, but it is understood that when a case does not fall within the rules of the Foundation, the university takes under advisement the desirability of granting relief.

The Foundation has, of course, no desire to suggest to the colleges the form in which supplementary pension systems may be maintained other than to advocate what may seem to be the wise educational policy. In a very small way, the payment of supplementary pensions, such as those at Williams College, affects the load that the Foundation assumes, since under this system an inducement is offered to teachers to retire promptly at sixty-five. This aspect of the matter, however, is one of small importance.

On the other hand, the educational desirability and wisdom of an arrangement under which retired teachers may obtain a compensation equal to or larger than the salary they received in active service, is at least open to question. The arrangement maintained at Williams is not the support of a pension system from a fund given for that purpose. It is, as has been kindly explained to the Foundation by Mr. Francis Lynde Stetson, chairman of the finance committee of the board of trustees, "a contract obligation to pay to our professors thereafter from time to time a pension which should be equivalent to an increase in salary." The practical effect of the arrangement, however, is to give a professor in many cases a pension equal to, or even larger than, the compensation that he received in active service—certainly an extraordinary situation, unless the pension had been in part at least paid by contributions.

NEW PENSION SYSTEMS

SINCE the publication of the Seventh Report a number of new pension systems have been announced. An account of the more important of these follows.

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH

The Rockefeller Institute for Medical Research announced on June 3, 1913, an addition of \$500,000 to its endowment from Mr. John D. Rockefeller, to form the nucleus of a pension fund.

The pensions are stipendiary in character, being three-quarters of the last annual salary to those retiring at the age of sixty-five, after fifteen years of service. Retirement is also permitted at the earlier age of sixty, after fifteen years of service, the pension in this event being one-half of the last annual salary, plus ten per cent for each year of service in excess of fifteen.

These pensions are offered only to members and associate members of the Institute, of whom there are now twelve. Disability allowances, however, are available for associates and assistants. For these a minimum service of ten years is required, the allowance to be the pro rata share to which the recipient's years of service entitle him, upon the basis of an allowance claimed at sixty years of age. The widow of a member or associate member who has served ten years is entitled to half of the allowance he was in receipt of, or would have been entitled to in case of disability. To render a widow eligible for a pension, her marriage must have taken place before her husband's retirement. Provision for minor children, in case of the death of the mother, is optional; the aggregate of any such allowances to children is not to exceed the pension to which the mother was entitled.

The Board of Scientific Directors, subject to the approval of the board of trustees, may add constructive years, not exceeding five, to the service of any person who enters the service of the Institute after the age of forty-five.

The maximum for retiring allowances is high, being set at \$10,000. The rules repeat the rule of the University of Chicago, that "the obligation to pay retiring allowances will be neither greater nor less than the obligation to pay salaries; so that if misfortune shall compel a percentage reduction of salaries, retiring allowances may be reduced in the same proportion."

This pension system is interesting as an attempt to operate under fixed rules in a service too small to admit of safe estimates of the rate of mortality, and also because of its decidedly stipendiary character, as indicated by the proportion of the active salary that is granted as a pension, the use of the last salary alone as the basis of calculation, and the very high maximum.

THE AMERICAN MUSEUM OF NATURAL HISTORY

The American Museum of Natural History established a pension system on March 1, 1913, for all of its permanent employees.

The system is a contributory one, three per cent of his salary being contributed by each employee and an equal amount by the Museum. Participation in the system is elective to present employees, but compulsory upon all future employees who are appointed under the age of forty-five. Those appointed over that age are not entitled to participate.

The beneficiaries are distributed into classes according to sex, age of retirement, and length of service. The lowest class, males retiring at sixty and females at fifty-five, after twenty years of service in each case, receive twenty-five per cent of the average salary for the last three years increased by one per cent for each additional year of service up to the twentieth year. In the highest class, that of a male employee retiring at sixty-five and a female employee retiring at sixty, after twenty-five years of service in each case, the pension is fifty per cent of the average salary for the last three years increased for each year of additional service as above. Unless, however, the employee has served thirty years, or has served twenty-five years and retires at the highest age, the period of pension payment is limited to the length of time that the pensioner was in service.

Death during service is provided for by a single payment to the nearest relative or the designated legatee, of an amount equal to twenty-five per cent of the average salary during the period of subscription with an increase of two per cent for each year after the first. In case a person has received a pension and dies within ten years, the heir or legatee receives a single payment ranging from the average salary if death occurs in the first year of pension, down to ten per cent if death occurs in the tenth year.

In case of permanent disability or dismissal after fifteen years, the employee receives a single payment graduated according to the pension disbursement. If illness or dismissal occurs before the fifteenth year, in the discretion of the pension board a single payment may be made equal to that upon death. In case of resignation at any time, the total contribution of the employee, with three per cent simple interest, is returned.

The complex arrangement whereby the amount of the pension is carefully graduated according to the age of retirement and the length of service is in striking contrast to the crude flat rate of contribution. Individuals will not receive pensions in proportion to their contributions, but as on account of the Museum's contribution of half the receipts no employee will accumulate his own pension, the lack of proportion can hardly be considered inequitable. The single payment for disability or at death instead of annuities is a safeguard to the fund which will, however, decidedly diminish its usefulness. The limitation in many cases of the period of pension

to a number of years not exceeding the period of service is an actuarial device to relieve the fund of payments to very aged persons. Sooner or later this will result in pitiable distress to individuals so unfortunate as to attain extraordinary longevity. The total failure to consider the problem of the accrued liabilities is most striking, and in a larger fund, notwithstanding the six per cent rate of contribution, would surely result in disaster.

On the whole, the system presents the somewhat curious aspect of having been worked out with great care on certain sides, while other equally important conditions are entirely neglected, or treated in a manner which has been abandoned by the latest and most carefully devised pension funds.

BROWN UNIVERSITY

Brown University adopted on October 8, 1913, a plan for the payment of retiring allowances and pensions to all of its professors and instructors. Any such officer may retire at his option or may be retired at the age of sixty-five, and must retire at the age of seventy. On such retirement the president or dean or professor after fifteen years of service, or an instructor after twenty-five years of service, is entitled to a retiring allowance of \$400 more than one-half of his average salary during the five years preceding retirement. Officers of the university may also be recommended for retirement on the basis of disability after twenty-five years of service as president or dean or professor, or after thirty years of service as instructor. In such cases the retiring allowance is \$320 plus \$40 for each \$100 of active pay, with an increase of one per cent for each additional year of service beyond those stated. Service in other institutions having a pension system, or on the associated list of the Carnegie Foundation, or approved by the Board of Fellows, is to be counted as a substitute for like service in Brown University. Provision is further made for the payment to widows of officers entitled to retiring allowances of pensions equal to one-half of the amount that the husband received or would have been entitled to at the time of his death.

These are substantially the requirements and provisions of the Carnegie Foundation, except that no maximum is provided under either scheme. Retiring allowances received from any other institution or foundations are to be considered as satisfying an equal amount of the retiring allowance due from the university, and the obligation to pay retiring allowances and pensions is to be neither greater nor less than the obligation to pay salaries.

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Teachers College, Columbia University, has amended its pension scheme instituted four years ago for the retirement of teachers who are not eligible to the benefits of the Carnegie Foundation. An officer entering at any age is to contribute an amount

which with added interest will approximate at the age of sixty years to one year's salary. The percentage of salary to be contributed by the officers is fixed on a graduated scale varying with the age at which first payment is made. Thus, those entering at the age of thirty pay 1.70 per cent of their salary, at thirty-five 2.30 per cent, at forty 3.20 per cent, at forty-five 4.80 per cent, at fifty 8 per cent, and at fifty-five 17.70 per cent. All contributions made by officers will be duplicated by the college, so that it is expected that an officer may retire at sixty-three years of age on about 30 per cent of his salary, a sum which it is hoped to bring up to 50 per cent by endowments or gifts to the fund.

THE FEDERATED SYSTEM OF THE ENGLISH UNIVERSITIES

The most interesting of the new pension announcements is the federated superannuation system for English universities and university colleges in receipt of exchequer grants.

The institutions are:

- The University of Birmingham
- The University of Bristol
- The University of Durham, Armstrong College
- The University of Leeds
- The University of Liverpool
- The University of Manchester
- The University of Sheffield
- University College, London
- King's College, London
- King's College for Women, London
- Bedford College for Women, London
- The London School of Economics and Political Science
- East London College
- University College, Reading

About ten years ago these universities and colleges, which were all founded during the nineteenth century, began to establish individual pension systems.

Owing to the comparative smallness of their respective staffs, some of the institutions did not create distinct pension funds of their own, but entered into contracts with English life insurance companies, by which the companies agreed to issue certain policies to all professors thereafter appointed, or professors of previous appointment who elected to take out policies. University College, Reading, University College, London, and Bedford College for Women, London, East London College, and the London School of Economics and Political Science made such arrangements. On the other hand, the Universities of Leeds and Birmingham, Armstrong College, Durham, and King's College, London, handled their own funds. In the institutions having arrangements with insurance companies, advances in stipend were to be cov-

ered by additional policies, or if this were not agreeable to either the beneficiary or the insurance company, the additional contributions of both the professor and the college were to lie at compound interest. The scheme for University College, London, was a voluntary one.

All of the systems were contributory, the professors and the college contributing equally, except at the University of Birmingham, where the college contributed six per cent of the professor's salary to the professor's own contribution of four per cent, and at the Bedford College for Women, where the college did not obligate itself to contribute anything, but hoped to be able to equal the professor's contribution of five per cent. This rate of five per cent of the salary on the part of both professor and college, or a ten per cent contribution in all, was the most common; University College, Reading, and the London School of Economics and Political Science had, however, a three per cent rate of contribution by each of the two parties, or six per cent in all; Armstrong College, Durham, graduated its rate, making it five per cent by professors receiving £600 a year and upward, and four per cent by professors receiving less than £600 a year, the college doubling the professorial contribution in each case.

In nearly every college the contributions of the professor and of the college were kept distinct; where there was an agreement with an insurance company, two policies, paid for respectively by the different sets of contributions, were issued; where the college retained the management in its own hands, two accounts were opened with each contributor. In every college, the professor or his heirs, in the event of death, dismissal, resignation, or retirement, received back his complete rights under the policy paid for by his own contributions or his total contributions at a fair rate of compound interest.

In the event of the professor's retirement at the stipulated age, he received, of course, the benefits of both policies, or the total results of both his own and the college contributions. In the event, however, of a severance of relations between himself and the college before he had arrived at the stipulated age of retirement, the rules varied from institution to institution.

Upon the resignation of a professor in one of the colleges in order to accept a chair in another institution, the professor received merely his total contributions with compound interest, and was compelled to start *de novo* at his new college. This would either impede the free passage of professors from one university to another, or it would occasion serious hardship to the professors making the transition. Upon the appointment, therefore, by the board of education, of an advisory committee, the question of superannuation in the several universities was immediately taken into consideration, and the announcement of a federated system is the most notable achievement of the committee.

This committee, under the official title of the Advisory Committee on the Distribution of Exchequer Grants to Universities and University Colleges in England,

was appointed by the Rt. Hon. Walter R. Runciman, president of the board of education, now president of the board of agriculture, on June 17, 1911, and consists of seven persons, whose tenure of office is for six years, one third of the members retiring every two years. The chairman of the committee is Sir William McCormick, secretary to the Carnegie Trust for the Universities of Scotland. The other members are: Professor James A. Ewing, the director of naval education; Sir William Osler, Bart., regius professor of medicine at the University of Oxford; Walter Raleigh, professor of English literature at the University of Oxford; Sir John Rhys, the distinguished Celtic scholar, principal of Jesus College, University of Oxford; and Sir Arthur W. Rücker, the well-known physicist.

The advisory committee issued a first report on March 28, 1912, in which it discussed a number of important subjects in higher education, among others the question of superannuation. Of the existing college schemes it was stated: "Many of them are marred by provisions based on the assumptions that an institution has no responsibility for the future of its professors until they have served for some such period as five or ten years, or after they have been transferred to another institution." The committee laid down the principle that when a man had entered upon a pensionable office, he should not be compelled to begin to accumulate his pension all over again upon each acceptance of a new appointment, but that each of the institutions that he served in turn should bear their equitable proportion in providing his final pension. "Adequate insurance and provision for old age can only be secured by continuously providing for it during the whole period of service without artificial breaks or restrictions which interfere with continuity."

The committee recommended that a portion of the exchequer grant be reserved pending the further consideration of a complete pension scheme based upon this principle, the amount so reserved to be in addition to the present appropriations of the colleges on behalf of superannuation. The board of education approved this recommendation.

The advisory committee then appointed a sub-committee, consisting of the chairman and Sir Arthur Rücker, to carry on the preliminary discussions and negotiations. A committee of university representatives was appointed by the universities and colleges concerned, which had from the beginning adopted a most cordial attitude toward the propositions of the advisory committee. The joint committee thus constituted framed the Federated Superannuation System. The university representatives on the joint committee included Sir Alfred Dale, vice-chancellor of the University of Liverpool; Dr. William H. Hadow, the musician, principal of Armstrong College; Mr. John A. Hobson, the steel manufacturer, member of the Council of the University of Sheffield; Sir Alfred Hopkinson, K.C., then vice-chancellor of Victoria University, Manchester, and Dr. Michael Sadler, vice-chancellor of the University of Leeds.

The first conclusion of the joint committee was that the fundamental differences

in the several university schemes rendered it impossible to produce a federated system by the coördination of the existing plans.

In framing a new plan, the joint committee, in addition to the principle that transfer from the service of one university to another should not interrupt the pension accumulation, adopted the preliminary recommendations that the accumulation of the pension should be begun as early as possible, which meant the inclusion of the junior grades, that there should be kept in view some provision which should inure to the benefit of the professor's wife and children, and that the same total proportion of salary should be contributed on behalf of the professors in all of the universities. The joint commission considered that this contribution should probably be ten per cent, of which not more than half should be exacted of the professor. For the financing of the federated system, the joint committee considered that the most effective working arrangement could be secured by means of insurance policies; especially because thereby the option could be given of a substantial benefit in the event of death.

Along these lines the advisory committee recommended in detail a federated scheme, and these recommendations having been approved by the board of education, it entered into definite negotiations with the several universities and colleges. These negotiations were in every case successful, and the joint committee, thus empowered, proceeded to complete the task.

This completion involved two undertakings, first, the selection of a limited number of insurance companies to carry out the contracts involved in the superannuation plan, and secondly, the drafting of such a form of legal agreement between the institution and the member of the staff as would give to the plan a practical effect.

For the first problem, it was, as the advisory committee says, "obviously necessary to obtain expert and independent actuarial advice," and to this end, the services of two eminent authorities in actuarial science were secured. The tenders of the insurance companies were submitted to the actuaries, and after an exhaustive discussion, the companies to take part in the scheme were selected by the joint committee with the approval of the actuaries.

The model legal document was drafted by counsel after a full discussion with the joint committee. It has various alternative readings, to suit the options, with explanatory marginal notes. To the agreement are attached three schedules, and the superannuation scheme, with an additional schedule attached. The document thus includes the entire legal machinery necessary to carry into execution the system planned by the advisory committee.

The plan went into effect on September 29, 1913. It is compulsory upon all members of the staffs of the institutions appointed after that date with salaries equal to £300 a year, or upon all members of the staff whose salaries may be hereafter increased to an amount equal to £300 a year. Any person appointed to a salary of from £200 to £300 shall be entitled to the privileges of the plan by written application addressed to his institution. Any person appointed to a salary of between £160 and £200 a

year may participate in the plan with the consent of his institution. All members of the staffs of the institutions holding office on September 29, 1913, at a salary equal to £160, may, with the consent of their institutions, place themselves under the scheme. The plan shall include only persons who, in the opinion of their institution, devote their main time to their duties as members of the teaching or administrative staff. A person who is a member of the staffs of two or more institutions shall have his salary aggregated for these purposes.

From the date of appointment or of joining the scheme until the member reaches the age of sixty, there shall be deducted from his salary a fixed per cent, not to exceed five, but no deduction shall be made on the excess of any salary over £1000 a year. During the same period the institution shall contribute such an amount as will make the total contribution of the institution and member equal ten per cent of the salary, subject to the foregoing proviso in regard to excess salary over £1000 a year.

In general the sum so contributed is to be used in paying the premiums upon a policy of assurance. In cases where it seems desirable, however, the money may, with the concurrence of the member, be invested by the institution for the benefit of the member, in the manner authorized by law for the investment of trust moneys.

The member shall select which of the optional forms of assurance policies he prefers. These policies are of three general forms: first, a deferred annuity with an equivalent surrender cash payment and with a considerable benefit in event of death in service, partly guaranteed, and partly consisting of bonuses dependent upon the insurance company's prosperity (endowment assurance); secondly, a deferred annuity with the return of accumulated contribution in event of death in service ("sinking fund policy"); and thirdly, a deferred annuity with an equivalent cash surrender, and without return of premiums in event of death in service.

The first type of policy, as it affords insurance protection, involves a medical examination at the outset. When an increase of salary takes place, the additional policy is granted without further medical examination provided a satisfactory declaration of good health can be furnished. After the age of fifty, however, additional policies of this type are not obtainable. This form of policy is attractive where the professor is desirous of making the greatest provision for his family in event of early death, combined with provision for superannuation. There are two variants of this type. In one, the double endowment policy, the guaranteed benefit on maturity is double that which would accrue on earlier death, the sum at maturity being increased at the expense of the death benefit. This variant is attractive to members whose chief aim is the superannuation benefit supplemented by a moderate death provision. The second variant, a sort of middle course, is the endowment assurance with a tontine reversionary bonus. That is, the ordinary reversionary bonus is exchanged for a large bonus which is not payable in the event of death, but only if the member survives until a policy matures.

The second form of policy provides for the return of the accumulated premiums, with compound interest, in the event of death or withdrawal before maturity. As compared with an endowment assurance, a distinctly larger sum is available if a professor should desire to surrender his policy upon transfer to another field of work. This type of policy is attractive to those who do not desire to secure a substantial sum in the event of early death, but prefer the somewhat greater guaranteed sum which is available on maturity.

In the third form of policy, in the event of discontinuance a fully paid-up policy is given securing an annuity proportionate to the number of premiums actually paid, or a cash surrender value is given subject to medical examination at the time of surrender. This form is attractive where provision in the event of death has already been secured by other means or is not needed, or where it is important that the utmost possible amount of annuity should be secured on retirement.

Upon the acceptance by a member of the fund of a post in another university within the federated scheme, the policies or investments on behalf of the member are to be transferred to the second university. Likewise in the event of a resignation for any other reason, the policy or investments are to be transferred to the member.

If the member remains in the service of his university after the age of sixty, the university shall determine whether contributions shall cease or shall continue as hitherto. The policies in the hands of the insurance companies shall continue to be held by them until the member actually retires, any annual payments, such as annuities on the deferred annuity policies, either accumulating or being paid over to the member, as the institution shall determine.

The companies selected by the joint committee are as follows:

Endowment Assurance Policies with profits payable at sixty or at previous death.

Clerical, Medical, and General Life Assurance Society.

Equitable Life Assurance Society.

Legal and General Life Assurance Society.

United Kingdom Provident Institution.

Deferred Annuity Policies maturing at age of sixty, with return of premiums.

Commercial Union Assurance Company Limited.

Legal and General Life Assurance Society.

Deferred Annuity Policies without return of premiums, maturing at age of sixty.

Legal and General Life Assurance Society.

North British and Mercantile Insurance Company.

The legal adviser to the joint committee pointed out that the only possible method of securing to the member or his dependents upon retirement the benefits contemplated by the scheme, beyond the reach of forfeiture upon, for instance, the insolvency of the member, was the creation of a "discretionary trust," whereby the institution

can in its discretion award the benefits to the member or his wife or issue, or any of them. Such a discretionary trust was therefore created.

Provision was made for the equitable merger of the benefits held by members under the existing superannuation systems, for arbitration in the event of any dispute arising concerning the scheme between an institution and a member or other person interested, and for the release upon six months' notice of any one of the universities or of the insurance companies from the obligation toward future appointees.

The advisory committee finally recommended that steps should be taken to create upon a definite constitutional basis a committee representative of the universities and colleges in the federated system, to which should be referred any subsequent alterations in the companies or the options available, and for the supervision generally of the working of the system. Temporarily, the informal joint committee which created the system would continue to act.

The Rt. Hon. J. A. Pease, president of the board of education, approved of the system as outlined in the Third Report of the Advisory Committee, issued on June 11, 1913, and the system went into operation on September 29, with the additional exchequer grants to the individual colleges for their share in the superannuation scheme, as recommended by the advisory committee.

This pension system is especially interesting because of the use of insurance policies as the normal medium of effecting the pension. Thereby the difficulty of establishing a pension system in a small service is overcome and no financial complications are forced upon the authorities. This solution might be a good one for small services in the United States, altho it is not known what arrangement would be possible with American insurance companies.

On the other hand, the system is not a particularly liberal one, there being no specific provision for widows and orphans, notwithstanding the high cost of ten per cent of the salary roll. It seems, therefore, that such an arrangement with insurance companies, even the economically conducted English over-the-counter ones, is rather expensive. The scheme, in fact, amounts to compulsory insurance at a certain amount, the employer paying half of the premiums.

Pensions by means of insurance policies afford an easy means of permitting the transference of the prospective beneficiaries from one service to another without the loss of protection against superannuation, but such a plan is not indispensable. The British government has working arrangements with the governments of the self-governing dependencies, with the Indian government, and with the colonies, whereby upon the transfer of a civilian official from the imperial service to one of the other civil services, the imperial government contributes for each year that the officer has hitherto served one-sixtieth of the salary of which he is in receipt at the date of transfer.

The fact that this insurance may be received in a cash payment instead of purchasing an annuity raises a serious question. One of the great benefits of a pension system

is the guarantee of support in old age, when, thru lack of connection with business affairs, people are peculiarly liable to the danger of bad investments, and susceptible to the influence of designing persons. Whether the security of an annuity should be sacrificed in order to give to the individual great freedom of choice is questionable. In any such system cases are bound to occur, sooner or later, in which a retired beneficiary who had converted his contributions into cash will have lost the money and be in real need.

A striking feature of the whole matter is the early age of compulsory retirement, so contrary to the ideas generally held concerning an old society. Even in the United States there are no colleges which retire professors as early as sixty, and comparatively few that have automatic retirements at sixty-five. Had the University of Cambridge enacted a statute which seems so satisfactory to the University of Leeds, it would never have enjoyed the services of Lord Acton.

It may be added that the Universities of Oxford and of Cambridge, and their colleges, are not assisted by the British government in any manner.

MASSACHUSETTS

An act to establish a retirement system for public school teachers employed anywhere in the commonwealth, with the exception of Boston, was passed by the Massachusetts legislature on June 19, 1913. The law provides for the appointment of a teachers' retirement board, to consist of seven members—the state insurance commissioner, the state bank commissioner, the state commissioner of education, three members elected by the beneficiaries, and one member elected by the other six. A teachers' retirement association is to be formed, of which all teachers entering the service of the public schools on and after July 1, 1914, must become members, and teachers already in service may become members at their option. The system of retiring allowances is contributory, and the assessments, which are to be determined by the retirement board, are to be deducted by school committees from teachers' salaries. Teachers may retire voluntarily at the age of sixty, or may be retired by the employing school committee after that age if incapable of discharging their duties: retirement is compulsory at seventy. On retirement and after thirty years of service, in the case of teachers engaged on or after July 1, 1914, or fifteen years of service in the case of teachers already employed, teachers become entitled to an annuity, together with a pension of an equal amount. Teachers required to become members of the retirement association are not to be permitted to participate in the benefits of any other system of retiring allowance. Provision is made for withdrawal equities of all contributions, with compound interest at three per cent, paid to the contributor withdrawing before retirement age, or his heirs in case of death.

THE CHURCH PENSION FUND

One of the most interesting developments in pensions during the year is the plan of the Episcopal Church to inaugurate a scientific and adequate pension system for its entire body of clergy, in place of the haphazard form of charitable relief which has hitherto existed. A joint commission, appointed by the General Convention of the Episcopal Church in 1910, with the active assistance and advice of a member of the staff of the Carnegie Foundation, has drawn up a tentative plan for the distribution of pensions. As a result, a board of trustees was incorporated under the title of the Church Pension Fund, with offices in New York. It is proposed first to raise a fund to pay off the accrued liabilities, and to carry future liabilities by a tax upon the entire Church, proportioned to the exact liability which each clergyman lays upon the fund, the rate of the assessment to be fixed by the age at ordination and the age at which stipend increases are received. It is estimated that the average assessment will be six per cent on the clerical stipends, thus producing at least \$500,000 a year. While the rules are not yet authoritatively settled, it is understood that they will cover (1) the aged clergy, (2) widows of clergymen, (3) minor children of deceased clergymen, and (4) clergy disabled at any age. Under instructions of the General Convention the minimum pension is to be \$600 a year and the maximum \$2000.

NEW YORK MUNICIPAL PENSIONS

WHILE the United States government, influenced by the truly appalling history of the Civil War pensions, hesitates to follow the example of every other civilized nation and establish a pension system for the civil service, and the state of Massachusetts probably stands alone among the states in providing pensions for its civil servants, the municipalities throughout the Union have been active in creating pension funds of various kinds. Policemen and firemen are almost universally within the scope of some pension provision, and it was from the city governments that the public school teachers first began to receive pensions, and it is from this source that most of those who are so benefited to-day obtain their annuities. It is most important, therefore, that municipal pensions, already so comprehensive and undoubtedly destined to much extension, should be established upon a sound basis. The momentous nature of the problems which these funds raise to the taxpayer of New York cannot be doubted. The position of New York, moreover, makes its municipal problems of interest to the entire country, and it is thus of moment that the pension funds of the metropolis should at the present time be the subject of general study.

The Bureau of Municipal Research began last year a study of the police pensions of New York City. The bureau could hardly have undertaken a task of which the community stood more in need. To direct this investigation the bureau secured from the President's Commission on Economy and Efficiency Mr. Robert von Reutlinger, an

expert accountant, and provided him with a corps of assistants. Enough evidence is at hand to warrant the impression that it is a veritable Augean stable that the bureau has started out to explore. It is not merely that the New York police pension system utterly disregards scientific principles; virtually all municipal pension funds do the same, and indeed many of the pension funds of business corporations would be hard pressed to establish their solvency before an expert actuarial investigation; but the police pensions of New York are paid without even respectable bookkeeping. Mr. von Reutlinger testified that there is nothing to show how much money is to be given out, and it is impossible to find, by looking at the list, how old a pensioner is. Moreover, and this is probably the most serious part of the situation, it would appear as if the disability list of the fund was used by the Police Commissioner to relieve the force of inefficient men or whenever the Commissioner wanted to get a man off the force. Unless a disability clause is carefully guarded, this is the inevitable tendency. The temptation to use a pension system to accomplish something besides provision against superannuation and the care of dependents is a temptation that appeals to both the good and bad sides of human nature, but is yielded to, as all pension history shows, only at the imminent peril of bankruptcy.

As at present organized, the police pension fund pays service pensions, disability or invalidity pensions, and pensions to widows, children, and dependents of members of the force. The investigation shows that apparently no thought has been taken for the future, and that all that the fund can rely on at present is the members' contribution of 2 per cent of salary and a fund of \$97,455. The accruing liabilities to those now in active service, their wives and children, will be \$121,000,000, and the annual cost will continue to increase for the next twenty-five years, when the maximum of \$3,600,000 will be reached for 1937. The present pensioners will in that period draw about \$28,000,000. Hence the total amount payable in pensions to those persons who have already come within the benefits of the law is \$149,000,000, all of which, with the exception of some \$4,000,000 arising from the 2 per cent contributions and a small amount from the funds in hand, will have to be found by the city. The present value of the pensions due in 1937 is \$65,257,367, which at 4 per cent compound interest will amount to \$144,491,600. The continuing liabilities, that is, the sum due to new entrants, will not reach their normal load until 1996; for the next twenty-five years their claims can still be met by the 2 per cent contributions. But in 1996, assuming that the numbers of the police force and their salaries remain constant, the pensions will amount to a sum equal to 33.44 per cent of the salaries then due; of this the city will have to bear the burden of 31.44 per cent, or \$349,852,169, until the normal load is reached.

The Bureau of Municipal Research, owing to lack of time, does not furnish a constructive scheme, but the work is a valuable contribution to the study of pensions and indicates the need of sound actuarial investigation before schemes involving so many interests and such vast sums are entered upon.

On April 8, 1913, Mayor Gaynor directed the Commissioners of Accounts to make an examination into the pension system of the city. On May 27 following the commissioners presented a report.

The commissioners open their report by remarking that they have discovered that very little time and study has been given by those in charge of municipal administration throughout the country to the pension question. This is true. But when the commissioners continue, "Whereas private employers have had the entire matter of pensions for their employees reduced to almost scientific exactness," they are somewhat optimistic. The amounts of the benefits have indeed been reduced to exactness, because the money comes out of definite private sources, and not out of the public treasury, but as to establishing a balance over a considerable period of years between liabilities and assets by expert actuarial calculation, the private employers have done little because few of them realized that pensions were a serious financial problem.

The commissioners touch the fundamental difference in the history of municipal pensions and private pensions when they point out that the municipal pensions have been established largely in response, not to official initiative, but to agitation carried on from time to time by those who were to be benefited. City officials have had only an insignificant part in determining the scope and benefits of these pension systems. The result, with both sentiment and politics cooperating to prevent any regard being paid to such sordid but unescapable facts as the multiplication table, has been the chaos of which New York City pensions are an illuminating example.

The first principle laid down by the Commissioners of Accounts is that the present pension laws are wrong in their source of supplies. During 1911 and 1912 thirty-five per cent of the income of the pension funds, being the largest single source of income, was derived from the excise tax collected in the greater city of New York. The commissioners justly condemn the dependence of any general city activity upon any specific part of the city's income.

The second principle laid down is that the pension laws are inconsistent in their application to the municipal departments because the percentage of assessment upon the employees varies, ranging from no assessment at all in the fire department to three per cent in the street-cleaning department. In addition the Board of Estimate and Apportionment has discretionary power, under the charter, to pension any employee under certain conditions without his having contributed any sum whatever to any pension fund.

The departments also are treated inconsistently because each department interprets for itself the rules in regard to fines and absent time for employees, one of the sources of income of the funds. Relaxation by any department in the enforcement of these rules would lay a proportionate burden upon the public revenues.

The departments also receive varying proportions, adjusted upon no definite principle, of certain license fees, permit fees, and penalties.

These criticisms are, in general, just. It may well be that different rates of assess-

ment in the different municipal services are justifiable, but it would appear that much of the discrepancy is due merely to lack of systematization, and does not rest upon reasons inherent in the character of the services or the situation of the employees. The law that unexpended balances of appropriations for any department are returnable to pension funds is rightly characterized by the Commissioners of Accounts as bad, as tending to swell budget requests to the Board of Estimate and Apportionment for this very purpose.

The Commissioners also emphasize the danger of discretionary power vested in the heads of departments, and report that men have apparently been retired before the period of physical incapacity, to the heavy burdening of the funds. They advert to the large deficits already presented to the city treasury for liquidation, altho only a small proportion of the city employees are within the scope of pension provisions, and call attention finally to the impossibility of bringing the funds as at present constituted within strict budgetary control, now universally recognized as one of the most desirable features of good municipal government.

It had been the opinion of the Commissioners of Accounts, when they originally suggested this enquiry to the mayor, that they could themselves present, within a reasonable time, final recommendations that might remove the existing abuses both in the formation and the administration of the pension funds. But they found the subject a vast one. They therefore recommended to the mayor the creation of a commission to take up the scientific study of pensions as applied to the municipality of New York, including thorough investigation of the existing New York funds, and such a study of similar funds elsewhere as would afford materials for constructive recommendations. The Commissioners suggested that the prospective commission be instructed to consider particularly:

- I. Legislative enactments to secure the creation of a permanent pension board.
- II. Uniform assessments of employees in departments operating under the pension system.
- III. Reversion of pension funds to a properly constituted pension board to be administered impartially for the benefit of all pensioners.
- IV. Uniformity in the provisions relating to the age of retirement, in the number of years of service before retirement, in the specific provisions regarding disability during service, and in the amounts to be allowed dependents for support.
- V. Legislative enactment prohibiting a retired city employee from obtaining employment with the city or state.

Mayor Gaynor accepted these recommendations, and appointed a commission with large powers of investigation and with instructions specifically as outlined by the Commissioners of Accounts. The chairman of this commission is Mr. George W. Perkins.

The task before this commission is a laborious and important one. The unification of the existing pension funds of New York upon consistent principles and the administration of these funds by a central and distinctively pension authority is a con-

structive work of no small difficulty. The heavy labor, however, that the commission will be called upon to perform is the framing of entirely new pension systems for the municipal departments, or possibly one single system for the entire municipality. Something of this kind will be necessary, for no one of the existing systems appears to be constructed in accordance with sound fundamental principles.

Pensions in a public service differ essentially from those inaugurated by private employers in that in the latter case there is always present a distinct financial limitation, whereas when a treasury as well filled as that of New York is available, considerations of statesmanship rather than of necessity place bounds upon the pension benefits. A balance between receipts and expenditures does not have to exist.

The commission must decide, first of all, whether it wishes to construct a pension system that will be self-supporting, with the assistance, if any, from the public treasury to be limited definitely in amount beforehand, or whether it deems it wise to frame the best rules for distributing benefits, having in regard the good of the service and decent treatment of the beneficiaries, and leave the amount of money involved to be paid by the public, with or without assistance from such other sources as contributions of prospective beneficiaries. The two procedures are radically different. In the construction of a self-supporting system the financial element is the controlling consideration, the benefits being moulded as well as is possible within the limits imposed. If, on the other hand, the principle of support out of the public treasury is accepted, the effect of the retirement benefits upon the service and their general equity are the main consideration, altho even here the burden upon the taxpayer must be kept in mind.

In either case, the actuarial calculations will be extensive. If the commission should decide to recommend a self-supporting system, the contributions of the employees, which would then probably constitute a large part of the income, will need very nice adjustment. Even if it should be decided that pensions should primarily be a charge upon the treasury, with contributions as an ancillary resource, it is to be hoped that the commission will investigate thoroughly the methods of contribution in use, and frame a plan, not upon rough averages, but so that the amount of each contribution will be just to the individual from whom it is exacted. To whatever degree contributions are utilized, the commission will have on its hands the problem of the accrued liabilities, the pension problem most frequently neglected.

A pension system cannot be introduced in any service without gradually affecting all of the conditions of the service. The commission will have to consider this in framing the benefits, and this will require a considerable power of forecasting causal connections. For this reason it may be found advisable to suggest different rules for different departments, and even for different classes of employees within the same department. There is a natural tendency to devise simple rules that on the whole will seem to work well; but complex conditions can generally be served only by equally complex provisions, and like the rates of contributions, general rules, however they may serve

the large majority of cases, are apt to cause considerable inconvenience in the numerous cases that deviate from the normal. The commission also, like all bodies charged with inaugurating pension legislation, must be on its guard against the desire to effect reforms thru the medium of the pension system. A pension system should be so flexibly constructed as to conform to any changes in the conditions of active service; it should never be an obstacle in the path of reform. But it is a fallacy, fraught with possibilities of much disaster, to attempt reforms in a service in any other way than by direct changes; a pension system has enough upon its shoulders to solve the problems of superannuation and disability alone.

The fire department fund does not require contributions from the men. As an extra-hazardous service, pensions in this department may well be considered as upon an exceptional footing. During the year 1912 the receipts of the fund amounted to \$994,406, of which the principal items were: from licenses and permits issued by the Bureau of Combustibles, \$116,289; from excise receipts, \$546,862; from the foreign fire insurance tax, \$153,746; and directly from the municipal treasury, \$127,097. The expenses of the fund were \$993,535, of which \$674,855 were disbursed in annuities to retired firemen, \$278,273 in annuities to widows and orphans, and \$32,573 in disability annuities. The fund thus balances its receipts and expenditures and possesses an accumulation of \$852,154. New York is spared the spectacle presented in some cities, where the pensions for this heroic service, which concerns every citizen so nearly, are eked out by the proceeds of entertainments and the solicitation of individual subscriptions.

The principle upon which this fund is constructed is, however, obviously faulty. The excise receipt is a stationary source of income. There is no conceivable relation between the receipts from licenses and permits issued by the Bureau of Combustibles, or by the tax upon foreign fire insurance companies, and the amount of the annuities to superannuated firemen and the widows and orphans of firemen. The increase of the latter is probably at an entirely different ratio from the increase of the former, and if greater, as it probably is, will in time wipe out the accumulation. Pensions to firemen, whether with the assistance of contributions on their part or not, should be frankly assumed as a proper burden upon the public treasury, and not indirectly charged upon certain forms of the public revenue. If the fund receives the excess of this revenue for purposes of accumulation, it may lead people to consider that the fund should reduce its expenditures when the insufficiency of such specific revenues causes a deficit. Such a deficit is almost certain to occur unless the specific source of revenue is extraordinarily large, because it is a most unusual form of tax that will increase as fast as the liabilities of a pension fund increase.

NEW YORK TEACHERS' RETIREMENT FUND

The New York City Teachers' Retirement Fund has placed itself in the hands of the actuary of the Mutual Life Insurance Company for examination. Such valuations in England are very common, and when done by leaders of the actuarial profession like Mr. Manly, Mr. King, and Mr. Hewat, whose contributions to pension literature are the classic productions on that subject, the funds thereby secure not only expert statistical service, but if the managers are open to receive it, advice on all matters pertaining to pensions from the most mature experience. The practice of placing in the document creating a fund the requirement for an actuarial valuation at stated intervals is growing, having been adopted by the British government in the law establishing the elementary school teachers' fund, where the valuation is septennial. The reports of these valuations—and when the funds are public they are generally printed—form an exceedingly valuable portion of pension literature. In the United States, where pension systems, altho including in their scope large bodies of individuals, are far less developed scientifically than they are in Europe, valuations of existing systems have been rare.

This examination was undertaken by the New York Teachers' Retirement Fund because during the last three years the expenditures have exceeded the income, and if this excess, which amounted in the year 1912 to \$137,141, should continue, the surplus, which consisted on January 1, 1913, of \$577,263, will soon be exhausted.

Without presuming to speak from more than a general statement of the facts, it may be predicted confidently that this excess will continue during the next five years, probably at an accelerating rate, and that therefore, at the end of twenty-three years of the fund's existence, at the latest, the surplus accumulated during its first sixteen years will have disappeared. Why anybody should be surprised at this, it is somewhat difficult to see. It is precisely what might have been expected. In fact, the adherence to rule is almost ludicrous. A recent general statement concerning pension funds that are not technically adjusted says: "After about fifteen years they begin to experience difficulties, and at about the twenty-fifth year, if they indeed last that long, they are in a bankrupt condition."

The New York Teachers' Retirement Fund has three sources of income: First, five per cent of all excise taxes collected in the city of New York; secondly, a one per cent deduction from all teachers' salaries; and thirdly, deductions from teachers' salaries for absence or any other cause. In the year 1906, the first year under the present law, the income from excises was \$287,853; in 1912 it was \$284,212. Here is evidently a stationary source of income. The one per cent deduction from salaries was \$169,054 in 1906, and \$257,730 in 1912, an increase of \$88,676. The deductions because of absences were \$211,976 in 1906, and \$254,384 in 1912, an increase of \$42,408. The total increase from these two sources in the six years was \$131,084. On the other

hand, while the annuities stood at \$616,984 in 1906, they amounted to \$983,555 in 1912, an increase of \$366,571.

This is obviously an unwholesome condition. It is certainly not a surprising one. The excise receipts, when they were first received by the Fund, in 1898, amounted to \$166,000 more than the expenditures for annuities in that year. But the excise receipts have remained stationary, and probably had been stationary for some time previous to 1898, and surely no one supposed that the annuity payments would not show a steady increase. A one per cent deduction from salary has been proved times without number to be capable of supplying only a small fraction of the payments of a pension system. The New York Teachers' Fund, therefore, was thrown back upon the forfeitures of salary for absences to supply the normal growth in expenditures which every pension system presents.

There seems no adequate reason why the ratio of increase in absences should bear any relation to the ratio of increase of the charge for superannuation. They are as actuarially disconnected as any other two facts taken at random from the universe. For a certain number of years the forfeitures for absences increased faster than the pension expenditures, but the expenditures of a large pension system can be relied upon, if they are given time, to catch up to almost anything, and so in 1910 the pension disbursements caught up to the forfeitures for absences, plus all the other sources of income of the fund, and have been steadily marching on ahead of the forfeitures at an accelerating pace ever since. There is no conceivable reason to suppose that the race will not ever continue thus, until the pension payments draw altogether out of sight of the forfeitures for absence. The conditions governing the two sums of money remaining unchanged, to hope that the amount exacted for teachers' absences in New York would ever again bear the same relation to the pension payments for teachers that it did up to three years ago is as unreasonable as the hope that one of the fundamental natural laws of the physical world will some day reverse itself, for the irresistible upward growth of a pension budget is based upon great natural laws.

The explanation of the pension authorities is ingenious. Of course many of the absences of teachers are excusable, and the reports of the Board of Retirement swell the pension receipts to a great amount by making them include the money technically forfeited for excused absences, and then causing this money to appear again under the head of expenditures along with the payments to annuitants. But the addition of identical sums on both sides of a ledger, while it may be interesting as a specimen of bookkeeping, does not solve a financial problem.

It is true that the original New York law with regard to teachers' pensions provided that the board of education should amend its by-laws so "that the aggregate of the several sums deducted or forfeited on account of absence from duty shall be fully adequate to meet the demand upon the public school teachers' retirement fund, for payment of annuities as herein provided." Supposing, however, that this law meant that no absence of a teacher was ever, under any circumstances, to be excused, which

would create a situation involving much hardship, even this resource would not be adequate over a long term of years. Between 1898, the first year of the greater city, when comparisons are first possible, and 1912, the total accruing to teachers while absent, whether the absences were excusable or not, increased 564.7 per cent. During the same period the expenditures for annuities to teachers increased 862.8 per cent. Evidently the pension expenditures are drawing away from this theoretical sum as they are from the actual forfeitures from absences, altho at a slower pace.

This simply emphasizes the principle, as apparent to common sense as to actuarial science, that the receipts for a pension system must be actuarially adjusted to the future annuities, and cannot be drawn safely from an entirely foreign fund. It also brings up again, as in the New York fire department, the unwisdom of setting aside specific municipal revenues to meet pension demands. Whether teachers should forfeit their salaries for absences would seem to be a problem of administration unconnected with the question of pensions. If they should, the money apparently ought to go into the public treasury; if they should not, it hardly justifies the procedure to use the money to pay pensions. The pension system attached to the schools of a great municipality ought to be supported either by the teachers directly thru individual contributions adjusted to the individual pension, or by grants from the public treasury, or by some combination of the two methods. Other sources of income, apparently shifting the burden from both the taxpayers and the recipients, which may have been advisable when pensions had to fight hard for recognition, should be discarded to-day, if an opportunity occurs to revise the entire system.

THE EXCHANGE OF TEACHERS BETWEEN PRUSSIA AND THE UNITED STATES

For the Academic Year 1913-14 the following American teachers have been assigned to Prussian *gymnasias*:

<i>Name</i>	<i>Institution from which he comes</i>	<i>Subjects in which he is a teacher</i>	<i>Gymnasium assignment in Prussia</i>
HENRY EDWIN CARLSON	High School, Lincoln, Illinois	<i>English and History</i>	Sachsenhauser Oberrealschule, Frankfurt a. M.
GYFFORD DAVIDSON COLLINS	Central University of Kentucky, Danville	<i>German and Sciences</i>	Oberrealschule, Danzig
WILLIAM HENRI ELLER	University of Wisconsin, Madison	<i>English and Sciences</i>	Königliches Gymnasium, Spandau, b. Berlin
ERNEST GOTTHILF FISCHER ¹	Michigan Agricultural College, East Lansing	<i>English and Modern Languages</i>	Königstädtische Oberrealschule, Berlin
JOEL HATHAWAY	High School of Commerce, Boston, Massachusetts	<i>Modern Languages</i>	Realgymnasium, Potsdam, b. Berlin
WENDELL HERBRUCK	Queen's College, Oxford, England	<i>Comparative Law</i>	Königliches Gymnasium, Kiel
PAUL RADENHAUSEN ¹	Erasmus Hall High School, Brooklyn, New York	<i>German</i>	Siemens-Oberrealschule, Charlottenburg
CHARLES CARPENTER TILINGHAST	High School, Englewood, New Jersey	<i>German and Mathematics</i>	Schiller-Realgymnasium, Stettin
LOUIS E. WOLFERZ	Indemnity College, Peking, China.	<i>English</i>	Oberrealschule der Frankeschen Stiftungen, Halle a. S.

The character of the experiences that await the exchange teacher who goes from the United States to Germany is briefly indicated in the following quotation from the report of Mr. S. A. Leonard of Wisconsin, who served as exchange teacher in the Oberrealschule in Danzig during the academic year 1912-13.

"I can in no way acknowledge sufficiently the invariable kindness of those in authority to whom I reported, the friendliness and hospitality of my fellow-teachers, and the courtesy and interest of the boys whom it was my privilege to instruct and in many cases to become better acquainted with. I can but express once more my sense of the valuable opportunity which has been afforded me by this year of residence in Prussia, and thank the Committee who made it possible for me."

¹ Reappointed.

The Prussian teachers with their assignments in the United States and Canada are as follows:

<i>Name</i>	<i>Gymnasium from which he comes</i>	<i>Subjects in which he is a teacher</i>	<i>Assignment in this country</i>
TRAUGOTT BÖHME	Kaiser-Friedrich-Realgymnasium, Neukölln	<i>German, English, and French</i>	Worcester Academy, Worcester, Massachusetts
HERMANN BURCHARDT	Königliches Gymnasium, Duderstadt	<i>French and English</i>	Lawrenceville School, Lawrenceville, New Jersey
JOHANNES EVENIUS	Realgymnasium, Berlin	<i>French and English</i>	Phillips Exeter Academy, Exeter, New Hampshire
GEORG KAMITSCH	Realprogymnasium, Krossen an Oder	<i>Modern Languages and Latin</i>	Phillips Academy, Andover, Massachusetts
GEORG KARTZKE	Gymnasium, Charlottenburg	<i>English, French, and German</i>	University of Toronto, Toronto, Canada
MAX MÜLLER	Friedrich-Wilhelms-Realgymnasium, Stettin	<i>French, English, and German</i>	Dartmouth College, Hanover, New Hampshire
GUSTAV SANDER	Königliches Gymnasium, Duderstadt	<i>English, French, and German</i>	Horace Mann School, Columbia University, New York City
FRANZ LAUE	Herderschule, Charlottenburg	<i>French and German</i>	New York City Public Schools
WALTHER SEYFFERT	Gymnasium, Steglitz	<i>Modern Languages</i>	Hill School, Pottstown, Pennsylvania

The value to the American school of receiving a teacher from the Prussian system is suggested by the following paragraphs from the report of Mr. C. H. Bell of the University of California, who served as exchange teacher in the Musterschule, Frankfurt a. M., during the academic year 1911-12.

"The German secondary school teacher is by requirement a University trained man, and is generally excellently qualified for his profession, which he has adopted as a life calling and not, as often with us, as a stepping-stone to better things. He is better paid than his American colleague and except in cases of gross unsatisfactoriness has life tenure of his position. His salary continues when he is sick, whether it be for a day or several months; and he receives a pension on retiring, which increases according to the length of his period of service. He is required to teach only 20 to 24 hours a week, whereas the ordinary American high school teacher must actually teach 30 hours, without counting duty in study rooms and the vast amount of clerical work imposed upon him. For this reason alone we should be justified in expecting a discernible difference to our disadvantage in the quality of the work rendered. In the class-room the German teacher is a strict disciplinarian, sometimes seeming even a little too stern. But he secures perfect obedience and attention, and we have something to learn from him in this respect. He also secures a deference and politeness from his pupils which is most covetable for American boys, who do not always possess these attributes in too high a degree.

"The German language teacher has a tremendous advantage over his American colleague because of his close proximity to France and England. A trifling expenditure brings him to these countries. Some teachers find it possible to spend

each summer abroad, now in France, now in England. The governing bodies of State and town have a fund for aiding those teachers who otherwise could not go abroad for their preparation.

"I am absolutely convinced that during his school course the German boy gains about two years in development over the American boy."

An organization of former exchange teachers was begun in Berlin in the fall of 1911, as an outcome of an enquiry into the whereabouts of those teachers who had been engaged since 1908 in the exchange service. These teachers were scattered all over Prussia,—in Greater Berlin alone, in 1911, there were as many as eight,—yet they hardly knew one another owing to the absence of a uniting medium. The enquiry revealed on the side of these men both an unusual interest and a sincere admiration for American teaching as well as for American life in general; and they were thus more than others fit to spread correct information about the United States. Should they lose their first enthusiasm and be out of touch with the progress of the educational world in America, a most valuable experience might be doomed to remain but a pleasant episode of the past. With the foundation of the Amerika-Institut in Berlin a uniting medium had been established, and in its endeavor to serve as a vehicle for German and American values, such as were obviously represented by these exchange teachers, the Institut lent its aid to bring about a permanent organization among them. The present functions of the organization comprise monthly meetings with reports and discussions of educational subjects, together with the circulation of the latest literature concerning education in the United States. One of the chief topics of interest is naturally the system of exchange itself, the selection of applicants and their preparatory introduction, as well as the question of aiding American teachers in Germany. The Berlin members have availed themselves of every opportunity to receive the visiting Americans and to make accessible to them certain features of German educational life that might otherwise be overlooked. The possibilities of service in this direction are unlimited, and the organization may be made use of also in matters of appointment and in the future development of the exchange system. There is also a great interest in the teachers in the other states of the empire.

American teachers who have enjoyed the opportunity of exchange service in Prussia have expressed their intention of forming an association to collect and distribute information relating to the exchange, to promote friendly coöperation among those who already have been engaged in this work, and to render the exchange service more efficient and of greater value to the pupils of both countries.

They believe that the plan of exchange has already contributed to a better understanding between many people in the United States and many in Germany, and that it is clear that an extension and continuation of exchange teaching will afford one of the most practical means of bringing about a broader knowledge and a more tolerant attitude toward those social and political principles which have often been so difficult for the people of these two nations to appreciate in each other. The exchange

teacher brings the ideals of his own land to his foreign pupils, and has an opportunity to correct many erroneous notions. On his return, he has the advantage of having had a close acquaintance with the people among whom he has been living, and he can teach about them with appreciation, truth, and certainty. They feel that this is one of the surest and most economical methods of bringing about a mutual understanding between coming generations of Americans and Germans.

Applications for appointment to teach in Prussia, or requests from schools for a Prussian teacher, should be in the hands of the Foundation not later than the first of May prior to the year for which the assignment is desired. The assignments of both Prussian and American teachers are made about the first of August.

PART II
CURRENT EDUCATIONAL PROBLEMS

THE EVOLUTION OF COLLEGE ENTRANCE REQUIREMENTS

SEVERAL promising developments demand brief comment, in spite of the fact that this topic has claimed so much space in previous reports. The chairman of the National Education Association's Committee on the articulation of high schools and colleges has recently issued, thru the United States Bureau of Education, a most encouraging report. It indicates the recent and rapid extension among universities and colleges of the realization that low and uncertain entrance requirements demoralize both the college and the high school. It indicates also a growing understanding upon the part of the more conservative institutions that a rigid prescription of the traditional subjects for college entrance not only increases the number of conditioned students who hinder the work of the college, but also prevents the development of the high school in the direction of providing sound instruction, genuinely related to the needs of its students and of the community. Recent changes in entrance requirements in the direction of greater insistence upon the completion of the four-year high school course now make it possible to present a list of 330 colleges that announce this requirement. Less pronounced, but yet increasingly general changes in the flexibility of these requirements promise much for the increased welfare of the student, school, and college alike. This report will considerably further that end by showing schools and students how many worthy institutions will accept for entrance any reasonable high school course. The student may elect high school work that fits his needs, and then choose among the colleges those that will admit him upon the basis of such work, rather than, as hitherto, first decide upon his college and then cut his school work to fit.

In general, the number of subjects that are prescribed for college entrance is decreasing. The number for which credit is given is increasing. Whereas formerly all subjects were prescribed, nearly all colleges now permit of some choice, either by presenting a considerable list of subjects among which a choice may be made, or by allowing some portion to be chosen with entire freedom. Six institutions — Leland Stanford, Hamline, and Ohio Universities and Clark, Macalister, and Reed Colleges — offer the entering student entire freedom; they accept any subjects that are accepted for graduation by an approved high school. Thirty-nine other institutions allow entire freedom in subjects in from one-sixteenth to one-half of the high school course. Three institutions, Grinnell, Hope, and Whitman Colleges, allow free selection from among a list of entrance subjects approved by the college. The University of Michigan allows three-fourths of its entrance requirements to be satisfied in that way. Of the colleges that offer a list of accepted subjects from which choice may be made, some include any subject for which a considerable demand is expressed. Many other institutions, however, announce such meagre lists that they exclude not only subjects that are considered of prime importance by educators and the public at large, but even subjects that other colleges are insistent upon prescribing. Thus, nineteen colleges will give no credit for prescriptions in mathematics that are insisted upon by approximately the

same number of other colleges, and this is true of the language requirements of forty-nine colleges and of the science requirements of twenty-two colleges—a situation that would be amusing were not our schools and our children the victims of it.

The subjects that are definitely prescribed by the colleges, together with their distribution, still vary greatly. The University of Chicago prescribes English alone; the University of Minnesota, English and mathematics; the Universities of Wisconsin and Missouri add some work in foreign languages. Chicago thus prescribes only three-sixteenths of the high school course, the others only six or seven sixteenths. The average prescription of 203 academic colleges is between ten and eleven units out of sixteen, including four in foreign languages, three in English, two in mathematics, one in social, and one-half in natural science. This measurably approaches the desire of the National Education Association's committee that one-fourth of the requirement be left entirely free. It also virtually meets the committee's wish with regard to the amount of English and mathematics and social science prescribed. But it doubles the association's maximum of foreign languages and does not meet its wish that it be possible sometimes to omit either foreign languages or mathematics altogether. There are, however, 114 institutions that require no more than three units of foreign languages. Of these 105 may be entered with three units of Latin alone, 110 may be entered with three units of German alone. There are also 22 institutions that a student may enter without any foreign language, including for the A.B., Chicago, Michigan, and Minnesota Universities, and for the B.S., the University of Illinois and Barnard and Columbia Colleges.

The secretary of the Southern Association of College Women recently presented to that body a most encouraging report upon the improvement in entrance requirements in southern colleges since the year 1900. In that year only Johns Hopkins and Vanderbilt Universities and Goucher College required for entrance graduation from a four-year high school. By 1906 five others did so; by 1912, one hundred and sixty southern universities and colleges had announced such a requirement. Between 1900 and 1910 the Association of Colleges and Secondary Schools of the Southern States increased its requirement for college entrance from two to four years of high school work, and its membership from eleven to twenty-six institutions. Requirements, moreover, have improved in quality as well as in quantity since in 1900 West Virginia University required for admission the choice of thirty-nine out of seventy-seven courses in thirty subjects. All of this means, of course, improvement for both high school and college. Between 1906 and 1912 Virginia increased its four-year high schools from ten to sixty-one; North Carolina from four to seventy-one; South Carolina from two to fifty; Kentucky from eight to eighty-four.

COLLEGE ENTRANCE REQUIREMENTS

65

STUDENTS OF COLLEGIATE RANK IN 807 UNIVERSITIES AND COLLEGES IN 1912-13

<i>State</i>	<i>Institutions</i>	<i>Students</i>	<i>Students of College Grade</i>
Alabama	21	4,707	1,940
Arizona	1	301	200
Arkansas	17	3,625	1,042
California	19	11,376	7,864
Colorado	9	4,271	3,096
Connecticut	4	4,100	3,767
Delaware	2	303	169
District of Columbia	10	2,371	1,605
Florida	10	2,041	493
Georgia	31	6,702	2,428
Idaho	2	790	360
Illinois	40	26,886	14,269
Indiana	25	14,635	7,653
Iowa	40	13,251	6,607
Kansas	26	11,563	5,654
Kentucky	25	6,338	1,839
Louisiana	16	4,613	1,266
Maine	4	2,106	1,828
Maryland	17	2,863	1,653
Massachusetts	17	14,341	13,859
Michigan	11	8,038	6,236
Minnesota	15	9,413	4,187
Mississippi	22	6,055	1,665
Missouri	38	9,563	4,602
Montana	5	1,160	478
Nebraska	12	6,600	3,477
Nevada	1	212	212
New Hampshire	3	1,754	1,506
New Jersey	8	3,210	2,349
New Mexico	2	520	139
New York	32	24,214	19,365
North Carolina	34	7,313	3,150
North Dakota	6	2,761	839
Ohio	45	22,704	14,126
Oklahoma	12	4,190	1,111
Oregon	13	2,585	1,071
Pennsylvania	40	23,633	13,279
Rhode Island	2	1,185	1,128
South Carolina	23	7,480	3,017
South Dakota	10	2,937	928
Tennessee	37	8,930	2,112
Texas	37	12,653	4,405
Utah	5	3,481	1,312
Vermont	3	953	953
Virginia	26	5,763	3,409
Washington	8	5,036	3,316
West Virginia	8	2,286	652
Wisconsin	12	8,689	6,333
Wyoming	1	331	140
<i>Total</i>	807	330,832	183,089

That, however, entrance requirements that are published are seldom enforced for all of the students in an institution is evident from the table on page 65, which indicates that the catalogues of our institutions themselves show that about one-half of their students have not met the ordinary requirements for college entrance. Some institutions that announce these requirements have no students of college rank. There are yet other institutions that are neither so honest nor so ingenuous as to allow such a situation to appear; these carefully refrain from distinguishing between their college, special, and preparatory students. This spirit, however, soon becomes known to regional or state associations of colleges, to the state university, or to the state department of education. The state supervisor of high schools in South Carolina, for example, publishes lists of pupils entering specific colleges with the high school year completed and the college year entered by them. The Missouri College Association, by maintaining good standards, has caused numbers of institutions to admit their limitations and to become frankly junior colleges and be recognized by the state universities as such. Records kept by the New England College Entrance Certificate Board of each student's record in each subject both in school and college illuminate the quality of the work in both institutions. The North Central Association of Colleges and Preparatory Schools has a system of inspection for both schools and colleges. All of these influences are working for the elimination of the conditioned student.

Along with encouraging instances of the general elevation of college entrance requirements and of the care to keep them genuine, there are some striking instances of the movement toward flexibility. Harvard, Yale, Columbia, and Princeton are the chief institutions that admit undergraduate students only by examination. The liberalizing of the procedure has been discussed in the last two reports. For several years Columbia has had an officer who is charged with the responsibility of knowing, thru correspondence and visits, the aims and needs of the schools from which students come. The last report of the president of Yale announces that now, for the first time, its academic and scientific requirements for admission are announced and administered together, that future examination papers will be submitted for criticism and suggestion to representatives of the secondary schools, that the number of examinations will be reduced as far as practicable, that the intention will be to test the general fitness of the candidate in the whole of a subject rather than in its respective parts, that the candidate's record of scholarship in the preparatory school will be given careful consideration, and that applications for admission will be considered even from those candidates whose subjects of study have differed from those prescribed for admission. Stevens Institute, beginning with 1914, will accept students on certificates from approved secondary schools. Brown, Wellesley, and West Point have made their requirements more flexible.

The tendency toward both elevation and flexibility is working happily in the field of professional education. Thus in 1900 there were only two medical schools that required for entrance two or more years in a college of liberal arts. There are to-day

thirty-two medical schools having this entrance requirement. Since 1910 twenty-one other medical schools have adopted the requirement for entrance of one year of college work. On the other hand, Harvard has announced its intention of modifying its high requirement which makes it difficult to earn the degree of M.D. before the age of thirty. Hereafter, the Harvard Medical School will be open not only to holders of an academic degree, but also to men who have had two years of college work including a year of pre-medical science. Men who have already obtained the academic degree by two years of academic and two years of medical work may enter the three-year course in the Harvard Medical School.

STATE REGULATION OF HIGHER EDUCATION

THERE has been in the last five years a marked recrudescence of state activity with regard to higher institutions of learning. In a number of states the president of the state university has been dismissed, whether justly or unjustly, in a peremptory manner. In other states there has been legislation with respect to the differentiation of state institutions. In still others the regulation of degree-granting powers has occupied the attention of legislators. On the whole, the last five years have been distinctly marked by the activity of legislative authorities concerning the state institutions, and by the evidences of some awakening as to the need for the regulation of all higher institutions of learning. Whatever may be the immediate outcome of this movement, it is probably a hopeful sign of the beginning of a successful effort to differentiate state institutions and to bring within fair limits the degree-granting powers of endowed institutions. The following statement recounts briefly the more interesting of these efforts, with the exception of the unique experience of the state of Iowa, which is treated in a separate section.

Within the past year three states have taken steps looking toward the administrative unification of their state institutions of higher education. These are Montana, Idaho, and Kansas.

Montana has for some time committed the supreme authority over its institutions of higher education to a state board of education and to a certain complexity of administration, described in the Seventh Report. The system can hardly be said to have worked well. The legislature in 1913 went further, and enacted that after the first of July of that year the University of Montana, the College of Agriculture and Mechanic Arts, the School of Mines, and the state normal schools should not only be governed by the State Board of Education, but should together constitute the University of Montana.

The act creating the new university made it the duty of the Board of Education to prescribe rules and make the necessary changes to prevent duplication of courses of instruction in the component parts of the university. Pursuant to this authority,

the board, at a meeting held in Helena on July 17, 1913, discontinued the engineering work at the university, and, with the exception of mining engineering at the School of Mines in Butte, concentrated all of the engineering courses maintained by the state at the College of Agriculture and Mechanic Arts at Bozeman. The dean of engineering at the university was transferred to be dean of engineering at Bozeman, and several of the engineering faculty of the discontinued engineering school were likewise transferred.

The University of Montana at Missoula was opened for students as recently as 1895. The engineering students have been few. The equipment, even including the new engineering building, for which the legislature made an appropriation of \$50,000 in 1911, altho sufficient for the needs, is not a costly investment. None of the objections against removing departments expensively equipped and deep rooted by time apply to the change ordered by the Board of Education. The same facts are true of the Montana State College of Agriculture and Mechanic Arts. It is a new institution with comparatively few engineering students and a moderate engineering equipment. Other things being equal, the Board of Education in its laudable desire to end the duplication of engineering work at Missoula and at Bozeman might have concentrated the engineering courses at either place. It decided to concentrate these courses at Bozeman.

For many reasons the conclusion seems regrettable. In the first place, the natural home of a school of applied science is in a university. It is largely accidental that engineering and agriculture have been yoked together in a number of institutions in the United States. As between a college of liberal arts and sciences and a college of agriculture, no educational argument can be advanced for joining engineering to agriculture, but many such arguments are strong for the association of engineering with the ordinary college and university curricula. This would be true in any state; it is especially true in Montana. The University of Montana, with the exception of a short course in forestry, consists of a college of liberal arts resting upon a high school basis and of a law school resting practically upon the same basis. The numbers in the institution are small, but it has the right composition to cultivate an atmosphere congenial to high grade work in engineering. The College of Agriculture and Mechanic Arts, on the other hand, is a conglomerate body, including a preparatory school, a secondary school of agriculture, a school of pharmacy, to which those who have finished one year of high school work are admitted, a course in domestic science with similar standards of admission, and a school of music with no admission requirements whatever. It is not the most favorable environment for developing a technical school of high order.

The second respect in which the advantages for the people of Montana are not evenly balanced between locating their engineering school at Missoula or at Bozeman is the effect upon agricultural education. This presents a matter of the highest importance. The state of Montana is an imperial domain, being considerably larger

than the entire Italian peninsula together with all of the adjacent islands. The potential agricultural wealth of this vast region is incalculable, and in its large variety affords an inexhaustible opportunity for the fruitful application of education to agricultural problems and methods. When the federal government furnished the state with funds for agricultural education and the state used those funds to establish a separate college of agriculture, one would have supposed that the educators in charge would have been eager to concentrate themselves and the resources thus provided upon so inviting and indispensable a field. But Montana has repeated the history of many other states. Because the words "mechanic arts" were placed by Senator Morrill in the Act of 1862, altho neither he nor anybody else knew what they meant, and neither house of Congress paid the slightest attention to them, the colleges founded on this generous federal appropriation have turned aside from the pressing need of agricultural education to the overcrowded field of engineering. In communities essentially agricultural, where a technological institute can reasonably be regarded as an educational luxury, the college of agriculture has engaged in fierce rivalry, to the serious detriment of the entire educational system, either to wrest from the state university its engineering school or to outshine it in engineering enrolment and equipment. In the meantime agriculture has in many cases sunk into relative unimportance.

Montana has immense mineral deposits and a great amount of water power. It may be quite appropriate for it to teach mining, and in a separate school. It may be equally appropriate that it should teach all of the other branches of engineering somewhere. But unless experience fails, the concentration of engineering at the college of agriculture will cause the engineering to run away with the agriculture. This is only natural, because engineering is a standardized subject, easy to establish and administer, while agricultural education is still in the formative period, and presents constructive problems of much difficulty. Nor does the history of the Montana College of Agriculture and Mechanic Arts hold out much hope that it will avoid this danger. That history is the familiar one of attempting everything except the principal duty straight ahead. Its recent publications indicate that the latest action of the Board of Education has filled it with the hope of becoming a large institute of technology. It is to be regretted that the admirable movement to create a "greater University of Montana" has not led to more practical results.

The state of Idaho has also during the past year placed its educational system on a new administrative basis. The statute abolished the Board of Regents of the University of Idaho, the boards of trustees of the two normal schools at Allison and Lewiston, and the State Board of Education, which exercised supervision over the public schools. In the place of these authorities there is created a new Board of Education with control over the entire educational system from the public schools up to and including the university. In respect to both the common schools and the higher

institutions the executive of the board is the holder of the newly created office of Commissioner of Education.

This is a fairly close approximation to the European ministry of education. Were there direct responsibility to the legislature, the correspondence would be practically complete. As it is, the indirect responsibility thru the medium of the appointing power reproduces essentially the situation in those German countries where parliamentary control is still in an imperfect stage of development, always allowing for differences in the degree of local autonomy. Much can be said in favor of the Idaho plan. Education is an organic whole, and the present cleavages may not be those that will permanently commend themselves to us. If separate authorities are erected having those cleavages as the demarcations of their respective jurisdictions, the wisdom of changing them can hardly be considered impartially. By avoiding these artificial distinctions, large problems of education should be capable of fundamental consideration.

The University of Idaho embraces, with the exception of the normal schools, the entire range of higher education thus far established by the state. The objection to a central board for several separate colleges like a university and a college of agriculture, does not apply. The especial difficulty which will confront the new plan, as in all organization, is the difficulty of personnel. Present and prospective American college presidents are so little accustomed to think of their office as subordinate to any other executive, that accommodation to the superior authority of the Commissioner of Education may not be altogether easy. The experience of other countries shows that this is possible, however, without any diminution of the dignity of the presidential office or of the efficiency of university administration. On the other hand, the Commissioner of Education will need to be mindful that his office is concerned with large problems of government and not with the details of administration in any institution. Such questions as the proper correlation of the normal schools in the state system, the introduction of teacher training-classes in the high schools, the continuance of the preparatory school at the university, and other matters upon which the Board of Education is called to render a decision, are the appropriate functions of the commissioner as its adviser and executive, leaving to the president of the university the care of its internal development and setting him free from the ever present pressure of politics.

The working out of the new policy of the state of Idaho will be watched with interest. It carries much promise.

Kansas is the third state that has effected a radical change in educational administration. In 1911 the legislature passed a bill abolishing the existing Board of Regents of the University of Kansas, of the Kansas State Agricultural College, and of the state normal schools at Emporia, Hays, Pittsburg, and Quindaro, and substituting therefor a single board of three members, with salaries of \$2500 a year, and the

authority to elect an educational expert at a similar salary to act as secretary. Governor Stubbs vetoed the measure on the ground that the size of the proposed board was altogether too small, and that men of the necessary calibre could not be secured for the low salaries authorized. He stated in his veto message that he had inquired of a large number of well-known men possessing the qualifications needed if they would accept appointment on the board and had not received a single affirmative answer.

The governor further stated in his message that he proposed to organize the nine regents of the institutions whose terms retained them in office into a voluntary commission to serve as a coördinating authority. He proposed to recommend to the commission that it constitute three committees of three members each, on financial and business management, on efficiency, and on scope and character of work. The committee on efficiency should not only investigate the efficiency of each institution as a whole, but also "investigate and determine the efficiency and value of every person from president to janitor of each institution." The committee on scope and plan of work was to have charge of "outlining, limiting and defining the curriculum of each institution, with a view to eliminating all duplication and competition." The committee on business and finance was to be intrusted with the duty of forming a budget for each institution, to be presented to the commission, and by it transmitted to the legislature, relieving the respective presidents of that duty. The governor also announced his intention of appointing a separate commission of five citizens, none of them connected with educational institutions, to study for the benefit of the legislature the entire problem of the control of higher institutions of education. Governor Stubbs included in his message some comparative statistics designed to show that "Kansas has more students than any other state, and that the cost . . . is less than in any other state." Similar statements have been published by the Chancellor of the University. Such statistics may be very misleading. The Kansas Agricultural College has a large number of students in a two-year sub-freshman course, and in addition many special students. It is not the number of students upon the books of a collegiate institution, but the nature of the work that they are doing, which is of moment. Comparative statistics are of value only for comparable groups.

In the state campaign of 1912 the platform of the victorious party contained a pledge that it would place all of the higher educational institutions of the state under a single board. Accordingly, on February 11, 1913, Governor Hodges signed a bill by which a board of three members holding office for four years, with terms expiring at different dates, was created to control these institutions and also the school for the deaf at Olathe and the school for the blind at Kansas City. The salary attached to membership on the board was fixed at \$3500 a year. At least two political parties must be represented on the board, which must not contain more than one alumnus from the same institution or more than one resident of the same congressional district.

The new board consists of Ex-Governor E. W. Hoch, Mrs. Cora G. Lewis, and

Mr. Edward T. Hackney, a lawyer and a graduate of the University of Kansas. It took office on July 1, 1913. It is too early at this time to attempt any intelligent criticism of the work of this board. It has begun in admirable spirit, and has announced that its sole policy in the conduct of the affairs of these institutions will be the desire to serve the educational interests of the people of the whole state. No more important work has ever been committed to a small board, and no work requiring greater intelligence, wider sympathy, and higher courage and firmness. The task upon which the board has embarked is a new one. The plan to place several institutions under the control of a single small board is one to be judged by its success or failure, and every American interested in education will watch with great care the work of this board and will extend to it his cordial good wishes.

Kansas institutions have not only suffered from the wasteful competition which has gone on in most states and from the unwholesome rivalries which ensue, but they have suffered more than most institutions from the continual process of investigation. For many years past there has been nothing in the condition of higher education in Kansas which could be considered settled. Even the chancellor of the University of Kansas and the president of the Agricultural College are reëlected from year to year. This has been in deference to a mistaken idea that thereby some sort of greater efficiency could be secured. To subject the entire faculty of a university to the uncertainty of a "reëlection" upon the theory that efficiency is thereby increased is a fallacy so crude and one so often exposed that it seems impossible that it could longer survive.

It will be remembered that Governor Stubbs planned a committee of the regents to "investigate and determine the efficiency and value of every person from president to janitor of each institution." It goes without saying that the only wise action such a committee could take was to seek to determine the fitness of the presidents of these institutions. It is the business of the president to find out the weak places in the faculty and in the administrative staff. A board of governors which concerns itself with such details is not likely to deal with the large questions of public policy with which such a board ought to deal. The spectacle of a group of business men appraising the respective efficiency of hundreds of university teachers is not an inspiring sight. Such a misconception undoubtedly has its origin in some vague idea that educational reform can be brought about by a superficial examination by a body of men who may be perfectly competent to deal with business details, but who are entirely at sea in estimating the significance and value of educational processes or the work of teachers. The fallacy arises out of a fundamental misconception as to the difference between government and administration. A board of regents is a governing board, not an administrative board. The moment it takes into its hands the details of administration it is on the way to lose sight of its larger legitimate work and to bring confusion into the administrative details. It may well be hoped that the new Board of Education may be able to steer between the danger of too great interference on the one hand and the lack of educational accuracy and knowledge on the other. It

has a most difficult problem, but if it is well worked out, the service will be a great contribution not only to the institutions of Kansas, but to those of the whole country. It remains to be seen whether a board which has the courage of its convictions can retain its place, even in a state where reform is so distinct a passion as in Kansas.

Six other states—Florida, Iowa, Mississippi, Oklahoma, South Dakota, and West Virginia—control their institutions of higher education thru the medium of a single board. The situation in most of these states has been discussed from time to time. The recent developments in Iowa are considered at length elsewhere in this report.

Three of these state boards,—those of Iowa, Mississippi, and South Dakota,—like the boards in Montana, Idaho, and Kansas, have under their jurisdiction only institutions that are purely educational. On the other hand, the Board of Education in Florida has charge not only of the university, of the college for women, and of the colored normal school, but also of the institutions for the blind, the deaf, and the dumb. The Board of Education of Oklahoma supervises the common school system, the institutions of higher education, and also four schools for defectives, two schools for orphans, and a reform school. West Virginia's system is complex. A board of control has full charge of the charitable and penal institutions of the state and of the financial and business affairs of the educational institutions. Upon request of the board of control there takes place a joint session of its members and of the board of regents, which controls the state university, two preparatory schools, six normal schools, and two colored institutions.

Experience is not yet sufficient to base any definite judgment upon this plan, but on *a priori* grounds it would seem that to join the administration of institutions for the defective classes with the administration of the usual institutions of education is of doubtful wisdom. The educational system of a state, whether of elementary or of college grade, is primarily intended for the normal individual. Care for the abnormal, whether the abnormality is merely the result of the deprivation of one of the senses or of a deeper cause, and whether the care takes the form of subsistence, education, or correction, would seem to require expert knowledge, in government as well as in immediate administration, such as a board constituted to deal with the general educational system would not possess. To remedy this defect by introducing into the Board of Education special representatives selected on account of their acquaintance with the abnormal child might be a danger to higher interests. Until we have a fair presumptive evidence that a system which links the defective to the regular educational administration has worked well, states may reasonably be cautious of adopting this plan.

The simplest form of state unification of higher education is presented by a simple working agreement between institutions. Indiana illustrates this in its best form. Indiana University dates back to the early days of the commonwealth; Purdue University is the outgrowth of the Morrill legislation, altho it has always been predomi-

nantly a school of engineering rather than of agriculture.¹ For many years the relations between the two institutions were similar to those prevailing in so many states. Wiser counsels at length guided their administration, and in 1910 the Foundation felt justified in inviting them to participate in the retiring allowance system, as forming, by complementary action, the single university of the state of Indiana without duplication of courses or wasteful rivalry. Under the arrangement which the authorities of the two institutions have concluded, and which they abide by cordially, Indiana University consists of the college of liberal arts, the school of education, the school of law, and the school of medicine, while Purdue cares for engineering and agriculture.

Michigan presents no definite system of agreement, but it is the custom of the presidents of the university, of the agricultural college, and of the state school of mines to gather in conference four times a year, at which meeting the matter of duplication is considered. The comparative autonomy of the northern peninsula of Michigan renders the position of the school of mines somewhat unique. The situation, as respects the university and the agricultural college, however, notwithstanding this admirable plan of frequent conferences, can hardly be quite satisfactory to those acquainted with the development of higher education in some of the neighboring states.

In Texas an association has been in existence for several years entitled "Organization for the Enlargement by the State of Texas of its Institutions of Higher Education." This association has rendered useful service in collecting statistics concerning the measure of support accorded by other states to their institutions, and in urging upon Texas the intellectual and material advantages to be derived from an increased generosity to collegiate education. These arguments have taken concrete form in a proposal that the institutions concerned join in an attempt to secure a tax levy, the proceeds to be divided harmoniously and equitably among them. The organization is composed mainly of alumni of the state university, having owed its inception to their association. The publications of the organization present arguments against any consolidation of the administration of the state university and the agricultural and mechanical college, and consider that too much importance has been attached to so-called "duplication" between tax-supported institutions in the same state. While frank statements are made concerning the University of Texas, deprecating the announcement of requirements for the degree of doctor of philosophy, and admitting "nor could any graduate of the University of Texas, under present conditions, be candidly advised to study for the Ph.D. degree in this state," the agricultural and mechanical college is treated with great consideration.

It is a display of great leniency to term the Agricultural and Mechanical College of Texas an institution of higher education at all. The announcements of its requirements for admission, with the utmost latitude of interpretation, can be made to cover only one year of a high school course, and even this meagre amount of pre-

¹ In recent years, however, agriculture has grown greatly at Purdue. In 1912-13 the freshman class in agriculture numbered 168, as compared with 98 in the sophomore class.

liminary education is not demanded in full of agricultural students. Such a standard might be a wise policy if the institution were engaged frankly in empirical agricultural training alone, but it announces, after a four-year course resting upon such a basis, postgraduate work leading to the master's degree, and the majority of its students are not engaged in agricultural studies but in engineering. It is pathetic that the great state of Texas should lead boys to think that they are really studying civil, mechanical, and electrical engineering, and even architectural engineering, upon such a slender equipment of previous training, and that it should send them forth decorated with degrees which they are led to believe have some meaning comparable to that which such degrees bear elsewhere. The educators of the state bear a heavy responsibility when, for any reason, they do not speak plainly to the legislature on this important subject. It is not surprising that the agricultural experiment station attached to a college of this description should never have received a single cent from the state treasury.

Attempts at state development and unification of higher education in Texas can hardly be very serious affairs so long as this situation at the Agricultural and Mechanical College, with its enrolment of over a thousand students, is not frankly and resolutely faced.

The state of Washington has for some time practically supported two state universities. The University of Washington at Seattle has, besides the college of arts and sciences and a graduate school, distinct schools of engineering, mines, forestry, pharmacy, and law. Across the Cascade Mountains, at Pullman, in the eastern section of the state, is the State College of Washington, founded on the Morrill grants. As the work of the college is not arranged in schools, but in departments, it is a little difficult to discover what subjects its total curriculum covers, or, to speak more accurately, does not cover. Besides agriculture, which plays a comparatively inconspicuous part, there are the usual courses in arts and sciences, all kinds of engineering, pharmacy, veterinary science, education, music and the fine arts, and architecture. The state of Washington is a great commonwealth and the possibilities before it are almost boundless, but it is difficult to see why its citizens should not be content with one university, and certainly, for a long time to come, with one engineering school. Especially is this true when the extraordinary agricultural possibilities of the state offer such opportunities for the state college to fulfil its legitimate functions. If the state wishes to provide a separate university for the two halves of its territory formed by the barrier of the Cascade Mountains, it should adopt such a policy deliberately, not drift into it. By such drifting it will abandon for many years the opportunity of developing one really excellent university.

The legislature of Washington, in 1911, levied a continuing mill tax, different proportions of which are to constitute separate funds for the university, the state college, and the state normal schools, the university to receive forty-seven and a half one-hundredths and the state college thirty-two and a half one-hundredths. In 1916

the president of any of the three institutions may demand the appointment by the governor of a commission of five persons to report to the legislature of 1917 on the advisability of changing the mill tax. This is a step away from the usual scramble before the legislature, by each institution, to get all the money it possibly can, irrespective of its real needs, with such check only as is afforded by a busy committee on appropriations.

In the spring of 1913 one of the regents of the University of Washington began to argue strongly in public in favor of a consolidation of the two boards of regents of the state university and the state college. The governor is understood to have taken the matter into consideration. As yet no definite action has been taken.

The state of Ohio has for many years supported three institutions of higher education, the Ohio State University at Columbus, Ohio University at Athens, and Miami University at Oxford. In times past this situation resulted in unseemly struggles before the legislature to obtain the means for unwise expansion, and in wasteful duplication of educational effort. The legislature of 1906, however, altered this situation by defining, thru statute, the status of each institution. To the Ohio State University at Columbus, itself an evolution from an earlier agricultural and mechanic arts college founded under the Morrill acts, the legislature assigns the position of a complete state university, with all advanced and professional instruction. Owing to the recent growth of the institution, these departments present a true university nature rather *in posse* than *in esse*, but the generous appropriations made to it by the state, and the lines along which its development has taken place since it has been in receipt of them, leave little doubt that it will within a reasonable time rank with the stronger state universities. To Ohio University and Miami University the statute assigns the function of colleges of liberal arts, "but not to include the technical or graduate instruction, aside from the usual graduate work for the degree of master of arts," and it straitly charges the representatives of the respective institutions not to violate, or attempt to violate, the policy thus enunciated by the state.

Altho the present situation, with preparatory schools and loose and weak music schools and "schools of commerce" attachments, leaves much to be desired, this authoritative announcement of the policy of Ohio with respect to higher education is a great step forward. The policy appears, in the main, to have been adhered to by the respective institutions. A loyal acceptance of it, over a considerable period of time—and it is a policy advantageous to all concerned—would seem to render unnecessary further administrative machinery, such as a central board. The attempt to administer a policy by formulation, without constructing an administrative procedure especially designed to fulfil it, will be watched with interest.

Passing from the state's control of its own educational institutions to its supervision of educational corporations supported by funds which do not come from the public treasury, we find a notable addition recently to the small number of states that

endeavor to safeguard academic degrees. The governor of Michigan, on May 1, 1911, signed a general act in regard to the incorporation of colleges which contained the provision, "No college shall be incorporated hereunder until the incorporators shall have, for the permanent use and benefit of the proposed corporation, real, personal, and mixed property of a value of \$100,000, as found and appraised by the Secretary of State." Colleges already incorporated may secure the benefits of the statute by complying with its requirements. This is an eminently sound piece of legislation, going considerably beyond what the Foundation ventured, in the Seventh Report, to suggest to Congress for the District of Columbia. Had such a law been upon the statute-books of the states generally for the past generation, American education would have been spared much of its present confusion.

Massachusetts has for a considerable period limited to the legislature the right to give institutions the power to confer academic degrees, and in 1912 the legislature made it the duty of the Board of Education to report annually upon the petitions of institutions desirous of acquiring this privilege; institutions already incorporated are required to report annually to the board. In 1913 Governor Foss vetoed a bill which gave to the Suffolk Law School of Boston the power of granting the degree of bachelor of laws, after the legislature had passed such a bill despite the adverse report of the Board of Education. The bill failed to pass over the governor's veto.

Pennsylvania has a college and a university council, whose approval must be obtained before an institution can confer degrees. The Maryland State Board of Education may publish a list of approved colleges and universities, and fix the standard for such approval.

In New Jersey a law of 1912 gave to the State Board of Education the responsibility of approving the terms and conditions on which degrees are granted by institutions that are less than twenty-five years old.

The state of New York, as is well known, exercises, thru the regents of the University of the State of New York, a control over all institutions of higher education. The regents alone have the power to grant collegiate charters, and no institution can confer any degree or conduct any faculty or department of instruction in any place except in accordance with the specific prescriptions of its charter. The regents will not give an institution the power to confer degrees unless it satisfies them that it has suitable provision for educational equipment and proper maintenance.

In practically all of the states of the Union, with these six exceptions, the right to incorporate colleges and universities, with the power to confer degrees (except in medicine), is open to everybody under a general law, which rarely contains any restrictions whatever. The privilege of founding a university is as freely accorded in most states as that of opening a grocery store, and the university frequently has the smaller resources.

POLITICS AND EDUCATION IN IOWA

IN a previous section some space has been devoted to the effort to describe the somewhat swiftly moving changes which have been going on in the past year in the field of state supervision of education. In many states the need for some better coördination of the state higher institutions of learning has been keenly felt. A sharp competition for students and for state appropriations has been going on for years between these institutions. In most cases this rivalry exists between the state university, the state college of agriculture and mechanic arts, and the state normal school, or, as it is coming now to be called, the state teachers' college. In a few states a special form of school, such as a mining school, adds an additional factor to the competition. For some years past various states, feeling acutely the weakness of this situation, have sought in one way or another to bring their institutions into some sort of profitable relationship. The most thoroughgoing effort of this kind is that inaugurated some years ago in the state of Iowa, under which a single board was placed in control of the state university, the state college of agriculture and mechanic arts, and the state teachers' college. The organization and function of this board was fully described in my annual report of 1909. The board has now had four years of history, and during the past year it sought to put into effect a plan that it had worked out for the coördination of the three institutions. The friends of these three institutions in an appeal to the legislature completely overturned the plan which the board presented, and for the time, at least in large measure, destroyed the board's authority. From the standpoint of administration and from the standpoint of education, from the standpoint of the taxpayer and from the standpoint of the educator, the history of this proceeding throws such light upon the treatment of such questions, that the Foundation has made an effort to obtain so far as possible the full facts concerning it. I attempt here to set forth these facts in as full detail as the student of education and administration may wish to have them.

HIGHER EDUCATION IN IOWA PRIOR TO THE CREATION OF THE BOARD

For a clear understanding of the situation, it may be well to recall that before the creation of the present Board of Education there were three institutions of higher education in the state, each controlled by its own board,—the State University of Iowa, the Iowa State College of Agriculture and Mechanic Arts, and the State Teachers College.

The University at Iowa City is of the typical American form. Around the nucleus of a college of liberal arts various schools have clustered. They seek to cover in the aggregate the entire field of education except agriculture. Engineering, developed from the beginning of the university in 1857 in the College of Liberal Arts, became in 1905 the College of Applied Science.

The State College of Agriculture and Mechanic Arts at Ames was founded in 1869, on the basis of the Morrill grant, and includes as its three important divisions, agriculture, engineering, and home economics. For many years the engineering students outnumbered those in agriculture, but the situation is now changed. The home economics course is in large measure a teachers' training course for women, and receives considerable popular support upon the ground that farmers' daughters should have the same advantages as farmers' sons, and in the same institutions.

A state normal school was started at Cedar Falls in 1876 with the plan of offering a four years' course leading to a degree. The completion of the first two years was to entitle the successful candidate to a position as elementary school teacher; three years would qualify for a high school position, four years for a principalship, etc. For a generation only a two years' course was given, but in 1908 the two extra years were added, the name was changed to State Teachers College, and the institution was authorized to confer the degree of bachelor of arts in education.

In the situation as it has developed in twenty-five years no clear-cut educational policy for the whole state has been followed. The institutions have developed along competitive rather than along coöperative lines, a result due in the main to the fact that there was nowhere provided by the state any oversight of the whole educational field. No organization or set of men was authorized to make a study of education for the state as a whole. Everywhere institutional and personal ambition had full swing. Various conceptions of what constituted higher education inevitably arose. The university has, in the main, stood for fairly high entrance requirements, and has, in the last few years, been disposed to put its engineering upon a partly graduate basis. On the other hand, the two state colleges have been in a sense rapid-fire institutions, holding out the ideal of extremely practical results in the shortest possible time. They have, therefore, appealed more successfully than the university to the popular imagination; and this, coupled with the fact that they have had on their administrative staffs men of strong political influence, has gone far to bring about a situation under which the colleges have successfully appealed to an essentially practical people as standing for the sort of institution that a vigorous, self-reliant state desires.

In all three institutions numbers have been considered of supreme importance. American colleges, whether under state control or not, are alike in their appeal to numbers as the final test of usefulness, but in state institutions the reasons which prompt the appeal to this measure of success are more compelling than elsewhere. The universal argument to the legislature in favor of an appropriation is the long list of hungry students clamoring for the particular courses for which support is sought. No one argument counts so much, and amongst no other colleges is the temptation to sacrifice everything to numbers so strong as among competing state institutions, and perhaps nowhere else has this process been carried further than in Iowa.

The three state institutions present in their catalogues a total enrolment for the academic year 1912-13 of 7765 names, of which some 2880 are not of college grade,

even when judged by their own standards of admission. The process by which a department is worked up is simple. First, a course of study is established under an attractive name. Then by all possible inducements students are brought in to fill up the course; then an appeal is made to the legislature to take care of the unexampled demands on the part of students. The circle has no end.

While this situation has held, the institutions have grown in strength and usefulness. Good men have given devotion and thought to their work, and they rightly hold strong places in the affections of the people of Iowa. No one would desire to diminish either their usefulness or their hold upon public esteem. But no one who studies the situation seriously can doubt that they would serve the people of Iowa far better if they were conducted under an educational régime which stood for coöperation rather than competition, for quality rather than quantity, and which eliminated politics.

EVENTS LEADING UP TO THE CREATION OF THE BOARD OF EDUCATION

The rivalries of these three institutions, their struggles before legislative committees and the legislature itself, and the growth in their demands for support were reported upon by the joint legislative committee known as the Healy committee, which was appointed in 1897 to investigate the management of the charitable, penal, and educational institutions of the state.

At the time when that committee was preparing its report the general situation, so far as engineering attendance was concerned, was not unlike that which exists to-day. Both will be understood from an inspection of the following table. It does not include the students engaged at Ames in the study of so-called agricultural engineering.

ATTENDANCE AT FIVE-YEAR INTERVALS

	1892-93	1897-98	1902-03	1907-08	1912-13
University Engineering	50	32	69	249	168
Ames Engineering	179	137	441	704	495
Ames 4-year Agriculture	78	118	288	474	679

Five years before the appointment of the committee the high-water mark of attendance in engineering in the two schools had been reached, the figures for Ames being 179 and for the university 50. For the year 1897-98 these figures had been reduced to 137 and 32 respectively. In the face of this falling off it is easy to understand the recommendation made by the Healy bill to determine the courses of instruction to be pursued by each institution, "in order that both may work out their purposes in harmony and that the taxes levied on the people shall not be spent unnecessarily in duplicating appropriations." The committee went on to recommend that some board or commission should be created for arriving in an impartial manner "at a full understanding between the agricultural college and the state university."

This date, 1898, thus marks the formal beginning of an effort to prevent duplication and to coordinate these institutions.

The suggestion of the Healy committee was not immediately acted upon. Meanwhile, along with the general revival of business, engineering attendance had increased in the schools throughout the whole country. Nowhere was the effect of these changed conditions more apparent than in Iowa, where, in the ten years between 1898 and 1908, the attendance of engineering students increased at Ames from 187 to 704. In the university the gain was much slower for a time, and in 1904 the proposal was made in the legislature to abolish the school. Instead, \$50,000 were voted for its development. Even, however, with the rapid increase that followed this stimulation, for the year 1912-13 only 168 students were reported in engineering at the university as compared with 495 at the agricultural college.

Notwithstanding the fact that additional money was voted in 1904, there still remained a feeling in the state that the educational situation was not satisfactory. This conviction found frequent expression in the press. In this same session of 1904, in which the university was given its additional money for engineering, the Whipple committee was appointed to investigate the system of management and affairs of the educational institutions of Iowa. That is to say, after having appropriated the money to encourage competing institutions, the legislature appointed a committee to investigate them.

The report of this committee condemns duplication in general, singles out the expansion at Cedar Falls for particular consideration, and urges the enforcement of high school standards for admission everywhere, on the ground that the state is duplicating in an extravagant manner the work of high school grade. Finally, the committee recommended the establishment of a single board "to make rules and regulations respecting the management of educational institutions [and] to approve or disapprove educational policies as suggested by presidents or faculties."

For the purpose of carrying out this recommendation, the late Senator Whipple drafted a bill, which, after being debated by two assemblies, was finally passed in 1909. In its final form this act provided for a board of nine members, serving at a *per diem* compensation, of whom not more than one should be an alumnus of each institution. Appointment is by the governor and senate, three members retiring every two years. The board appoints a finance committee of three, with salaries of \$3500 a year, one of the three to be secretary both of the board and of the finance committee. This board took over from the existing boards of trustees of the three institutions their entire management. Subsequently the care of the State College for the Blind also was transferred to this board, whose official title is "The Iowa State Board of Education." It will be seen that the board thus created was invested with very large powers.

CONSTITUTION OF THE BOARD

When the appointments to the board came to be made, care was taken to include one member of each of the three former boards. It is clear from the language of the bill and the broad powers delegated thereby to the board that it was the expectation that steps would be taken by this board looking toward the elimination of duplication. It is probably true, however, that many persons, both in the legislature and in the institutions themselves, did not realize this when the board was created.

The appointees to the board were two bankers, one banker-farmer (in Iowa there is a very close alliance between banking and farming), one wholesale grocer, one ex-contractor, one ex-editor, and three lawyers. The members were influential, intelligent citizens, and their selection was made on the basis of an honest effort to bring together a representative body of fair-minded men. A study of the work of the board and of its attitude toward educational questions will also, I believe, convince the unprejudiced observer that the board made an earnest and thoughtful effort to carry out the intent of the legislation under which it was created. It was not a board of educators, nor indeed was a board of professional educators desired. The whole history of the board's work goes to prove that here was an intelligent, honest, and able set of men seeking sincerely to obtain a solution of an educational problem according to the best and most feasible methods.

THE WORK OF THE BOARD

The appropriations recommended by the board in 1910 passed the legislature without modification. The board also made various changes in the personnel of the institutions. It brought up the entrance requirements of the College of Agriculture and Mechanic Arts to the same plane as those of the university. It took steps to reform both the law school and the medical school of the university, to the enormous improvement of both. It consolidated the surgical chairs of the regular and the homeopathic schools of medicine, on the ground that whatever excuse there might be for maintaining separate courses for thirteen students in homeopathic medicine, there was no possible justification for separate instruction in surgery. In the administration of all these details the board seems to have had in the main the approval of the intelligent citizens of Iowa.

From the beginning, however, the board felt that the main purpose of its existence was to coördinate the higher institutions of learning with a view to preventing duplication and undue expense, and its purpose was so stated in its report of 1910. In making its plan for coördination the board spent a large amount of time, and the plan itself was evidently somewhat of a compromise. As adopted by the board in October, 1912, to go into effect in September, 1913, this plan contemplated three important changes. The state Teachers College was to become a training-place for elementary

teachers only. The state was to abandon the maintenance of two engineering schools, and all engineering instruction was to be given in a single school of engineering at the State College at Ames; and, finally, the course in home economics given at Ames was to be transferred to the university.

The board discussed its plan for coördinating these institutions in its report of 1912. In this report it defended the concentration of engineering instruction at the State College of Agriculture and Mechanic Arts at Ames on the ground of the sum of money invested in the plant, the number of instructors, and the number of students. In its argument the board urged that, while engineering might perhaps more logically have been established at the university and exclusively taught there, the fact that it had become more firmly established at Ames was a sound reason for continuing it in that institution rather than in the university; and in this connection it points out the fact that, while the university had been spending money in the development of an engineering school, it had decidedly neglected its college of medicine.

With regard to the Teachers College the board stated in clear language that the work required for the collegiate degree at the Teachers College is not only not equal to that of the best colleges, but that in addition it involves an unjustifiable duplication. It pointed out also the pressing need of elementary school teachers, and urged that this was the primary work of the State Teachers College.

The board rested its recommendation for the transfer of home economics from Ames to Iowa City on two grounds, the first of which was the avoidance of duplication. The board argued that in the College of Liberal Arts and Fine Arts at the university there were some 800 women, a large proportion of whom demanded opportunities for the study of home economics. In addition, there were great advantages in the association of the School of Home Economics with such a college and with the College of Education. Secondly, the board urged that it was the aim to introduce at the State College of Agriculture and Mechanic Arts short courses looking toward the preparation of men in the trades. The result of this policy would be that the Ames college would become preëminently an institution for men. The only occasion that now exists for the presence of women at Ames being the work in home economics, it seemed desirable to transfer this to the university, where it would be accessible to a larger and more diversified group of young women. Courses in home economics have become extremely popular in recent years. Just how much they accomplish in the way of training young women for the duties of the home has not yet been made clear. A large proportion of the women who take the courses with serious purpose are seeking to become teachers. The argument of the board that these courses might best be given in connection with the institution to which women would naturally go for a liberal education would seem to be a sound one.

The plan adopted by the board, like all compromise plans, was scarcely ideal, and yet no one free from local interests can, I believe, doubt that it was a long step toward economy and efficiency in the conduct of the institutions. For a state like

Iowa to be supporting two engineering schools is defensible upon no grounds, either of education or of public policy. It is too much to expect that men who conduct and who have given their devotion and labor to build up such departments should agree to this view. The teachers of every engineering school, of every college, of every medical school, easily and very honestly persuade themselves that there is something unique and distinctive about their own institution which warrants the expense of continuing it, even at the cost of expensive duplication. The engineering schools at Iowa City and at Ames are, indeed, not wholly alike. No two schools ever are. The personalities of the teachers and the student atmosphere vary from one to the other, but this is no argument for calling upon the state to keep up two such institutions. No one familiar with engineering education, knowing the present opportunities for engineering study, and free from local influences and interests, would defend the policy of two engineering schools supported out of state revenue. In this position the board was clearly and unquestionably right. The question as to which was to be given up was a more difficult matter to decide, but the giving up of either was a better solution than the perpetuation of the present régime. The decision of the board to transform the State Teachers College into a training-place for elementary school teachers is also sound.

THE FIGHT

The institutions of learning affected by these decisions did not accept the plan of coördination adopted by the board. Those who spoke for the institutions held that the interests of the state demanded that each of the institutions should retain everything it offered and should give up nothing. Upon the meeting of the legislature the fight was carried immediately to that body.

Those who had immediate charge of the raising of money and of presenting the claims of the institutions are well known. They consisted in part of alumni, in part of representatives of property interests in the three towns, and in part of officers of the three institutions, altho the attitude of the presidents and deans in the three institutions and their participation in the active campaign was by no means the same. An energetic lobby was formed and supplied with the necessary funds.

Pledges of hostility to the board's plan were quickly secured from the Democratic and the Progressive party candidates for governor. The Republican candidate after some delay came out with an unequivocal declaration against it. Altho it is a mistake to suppose that the citizens of the state, as a whole, then or later, took any widespread interest in this educational quarrel, the question had some political influence.

The committee representing the university in the fight presented a constitutional argument prepared by Mr. Lehmann of St. Louis, but finally abandoned the idea of a constitutional contest upon the ground that a legal victory would be a barren one. Numerous pamphlets were published on both sides, and there was a debate before a joint session of the legislature. The influence of the friends of Cedar Falls was exerted

more quietly, but none the less effectively. The graduates of the State Teachers College are mainly women, and they are, as a rule, devoted to their institution. A very large proportion of them have married influential voters, and the quiet effect of their influence probably counted for as much as the efforts of the other two institutions. In addition, in the case of the State Teachers College there was a very strong sentimental reason and one easily invoked. The head of this institution has done a remarkable work, and he is loved and honored by the whole state and occupies a place of high esteem on the part of educators throughout the United States, however they may differ from his conception of the development of the teachers college. The fruits of his success are visible in the institution which he has built up, with its buildings and student body and alumni. It was most natural for the legislator to feel that this whole matter was an attack upon an honored citizen by an absentee board, presumably at the instigation of meddlesome Eastern educators. In the face of such a sentiment the question of a sound educational policy had small chance to be heard.

A word may be said as to that phase of the discussion that was dwelt on in the heated efforts before the legislature, and that concerned the assertion that the board had acted in deference to the advice of educators outside the state. It seems clear that the board consulted a number of men in educational positions, both in the state and out of it, but, on the other hand, it is equally clear that the board made up its own mind from its own decision as to what was sound and feasible.

Into the details of the struggle before the legislature—the amount of money spent, the political combinations entered into, the appeals to the members—it is not necessary to go. As a matter of history it may be added that no conclusive action was really ever taken by the legislature to undo the action of the board of education,—that is to say, no bill was passed by both houses and signed by the governor repealing in statutory form the action of the board.

The measures that were discussed speak for themselves. There was first introduced in the house a concurrent resolution providing that the Iowa State Board of Education be advised and requested to rescind its action of October 8, 1912, relative to the departments and colleges of the three institutions. On the same day a concurrent resolution was introduced in the senate providing also “that the General Assembly ask the Board of Education that it rescind its order heretofore made and as above outlined, and that when the same has been so rescinded the proper committees of the senate and the house be by this resolution instructed to draft a bill wherein any unnecessary duplication of courses between the institutions named will be eliminated, and in which the field and purposes of the respective institutions shall be defined and outlined, under which rivalries may be removed as far as possible, and under which we may make the State University a great university in all the name implies, the State Agricultural College the greatest agricultural college in the country, and the State Teachers College the greatest training-school for teachers in the United States, and in which there shall be no conflict with the constitution or laws under which

the State University was provided for and organized, and under which there will be nothing at the State Agricultural College which will conflict with the Morrill Law of July 2, 1862, under which the State of Iowa accepted the land grant for the purpose of establishing the State Agricultural College, and in which its duties and purposes were outlined, and under which there will be nothing at the State Teachers College to conflict with making it what was intended by the laws under which the same was organized, the greatest teachers training-school in the United States." This resolution further recited that "it is not the sense of this body to criticize the action of the Board of Education whom we recognize as unselfish and as trying to do a thing that will be for the best interests of the future students of Iowa," etc.

Neither of these resolutions was ever brought to a vote.

The next move by the opposition was the introduction in the house of a bill known as the Klay Bill. This bill was reported on adversely by the committee, came before the house on a minority report, and on February 25 was adopted by a vote of 85 to 10 in the following amended form: "Be It Enacted by the General Assembly of the State of Iowa: Section 1. The several colleges, schools and departments of the State University, the State College of Agriculture and Mechanic Arts, and the State Teachers College in operation in September, 1912, are hereby established and shall so remain until changed by the affirmative vote of seven members of the State Board of Education. Section 2. This act being deemed of immediate importance shall take effect and be in force from and after its publication in the *Register and Leader* and the *Des Moines Capital*, newspapers published in Des Moines, Iowa."

This bill put the institutions permanently into politics and would compel the governor to shoulder a fight every time he was called upon to nominate members of the board. The bill went to the senate and was recommended for indefinite postponement. It was, however, put upon the calendar, but never came to a vote.

Meantime, under the pressure of the fight which had been aroused, a number of the members of the Board of Education had virtually decided to rescind their action, notwithstanding the fact that the senate committee on educational institutions was evidently friendly to the attitude of the board. That committee reported for passage in the senate the following measure: "Be it enacted by the General Assembly of the State of Iowa: Section 1. That Section Four (4) of Chapter 170 of the Acts of the 33rd General Assembly is hereby amended by inserting after the word 'State' and before the word 'to' in the last line thereof, the following, — 'and shall prescribe courses of study, and such course of study shall be provided and maintained in the several educational institutions as shall be adapted to the education of both sexes, without regard to the general purposes of such institution and shall include Home Economics which may be duplicated to such an extent as shall advance the educational interests of the State. Section 2. That Section One (1) Chapter 170 of the Acts of the 33rd General Assembly is hereby amended by adding thereto the following: 'And no member of this Board hereafter appointed shall be a resident of any county within

which any institution under control of the Board is situated.' Section 3. That whereas conditions have arisen which make it unwise for the Board of Education to carry into effect its order of October 8, 1912, relating to changes in the courses of study of the different schools under the supervision of the Board, therefore be it resolved that the Board of Education be requested to rescind its order of October 8, 1912."

This bill was passed by the senate on April 4, 1913. It went over to the house on April 9, and was amended in the house so as to require that no changes in courses of study in these institutions could be made by the Board of Education without a two-thirds affirmative vote of the entire board. Thus amended, the measure went back to the senate and was pigeonholed.

No further action of any kind was taken by either house, so that, as far as legal enactment is concerned, no legislative measure rescinding the action of the board was ever completed.

By this time the interplay of political threads had become so complicated that they are more difficult to untangle. Not only were the Board of Education and the opposing representatives of the institutions of learning involved, but also the whole question of appointment to the board, the action of the governor, and direct participation by the legislature in the government of the institutions. It was no longer a question of educational wisdom or unwisdom to be considered upon its merits,—the matter had become a complicated political struggle.

THE IMMEDIATE RESULTS OF THE FIASCO

A meeting of the board was held on April 3, 1913, at which only five members were present. The fact that the terms of three of these members were to expire on July 1, 1913, became influential in the situation. By a vote of four to one the board passed the following resolution: "RESOLVED, That the order of this Board, made October 8, 1912, relating to changes in the course of study in the several institutions be, and the same is hereby rescinded in obedience to the request of the General Assembly."

Perhaps no part of the board's history is more open to criticism than this meeting. If ever there was a meeting at which all of the members of the board should have been present, it was a meeting called for such action as was contemplated. If the former action was right and justifiable, the board should have been willing to stand by its convictions. No other act of the board conveys so definitely the impression of men swayed by political considerations as does this. To cause the most important matter that the board would ever decide to be determined by the vote of a minority whose reappointment hung in the balance displayed a situation that it is not pleasant to contemplate.

On the other hand, the spectacle of the state legislature undertaking to fix courses of study in an institution of learning, to decide the details of college administration,

and to prescribe to an honest and intelligent board what it ought to do, represents a situation full of danger for the state and for its educational institutions. There are few instances on record in which a legislative body has undertaken to deal with such minute questions of university administration. The legislature even went so far as to pass an act restoring separate chairs in surgery in the State University Medical School for the supposed benefit of homeopathic students.

The whole transaction, whether considered from the standpoint of the institutions themselves or from the standpoint of the legislature, is a travesty on educational administration. The friends of the university were naturally displeased at the legislation which restored in the Medical School a second set of surgeons, but it is hard to see how the advocates of the university who appealed to the lobby had just cause for complaint. If one set of men may go to the legislature to secure their wishes independent of the governing board of the university, there is no reason why another set of men may not do the same thing, provided they have sufficient influence.

As an outcome of the whole affair the institutions themselves are definitely in politics, and there they are likely to remain, so far as one can see.

THE ULTIMATE EFFECTS ON EDUCATIONAL PROGRESS

It is perhaps too early to determine the lessons to be gained from the experiment which Iowa has tried, but some questions inevitably present themselves to the student of education.

Naturally the first enquiry in the mind of the observer relates to the possibilities of the plan of government which has for the time being been somewhat discredited. Is a board organized as this board was inherently ineffective? Is the fiasco the result of the method of administration itself, or is it due to weaknesses in the constitution of the board?

It is evident from the experience of this board that there is a vast difference between their problem and that of the usual board of trustees concerned with a single institution. In this last case the institution is the sole care of the board. The president interprets the institution to the board and it acts under constant educational leadership. The board which is seeking to supervise three competing institutions finds itself receiving, in many cases, partisan advice from the competing presidents, and is constantly tempted to dip into administrative details for which its members have neither the knowledge nor the capacity. A lay board is effective only under able educational leadership in whose non-partisanship it believes. It is difficult to secure such a relation and such leadership where a single board is supervising competing institutions, and the moment such a board leaves the field of educational governance for that of actual administration, disaster is sure to follow.

Certain weaknesses in the constitution of a board drawn from widely separated points in so large a state as Iowa are evident enough. Distances are great; the mem-

bers are busy men; and the difficulty of getting a full attendance at meetings and of obtaining at the meetings which were held a sufficiently careful consideration of all the problems was evident. Under such conditions the management of the board almost inevitably tends to fall into the hands of the two or three men who give time and thought to these problems. Such a régime does not make for public confidence or for the thorough knowledge of institutional affairs.

It is quite clear also that, while the present board was made up of high-minded and able men, it had from the beginning an inherent weakness due to the political connections of its members. No matter how intelligent and high-minded such men may be, active participation in politics not only gives them a political attitude of mind with respect to the determination of administrative questions, but inevitably weakens the force of their decisions in the minds of the public. In the present case the public will not forget that a member of the board was chairman of the state committee of his party, and that other members were in active political relations. Every good decision of the board was discounted from this point of view, and there can be no question that herein lay its chief weakness. Good and intelligent men as they were, the public never forgot that they were appointed by a political governor, that they never themselves entirely lost sight of political considerations, and altho their final action was taken most honestly and without political bias, altho it was a courageous and on the whole a wise measure, and one which was in the interest of education and of the whole state, still more in the interest of the institutions themselves, nevertheless the board as it was constituted and the influence that it had on public opinion were weakened at every point by the vague feeling in the public mind that politics must inevitably enter into the decisions of a board whose members were active in politics.

This question of finding a rightly constituted board lies at the root of the various efforts now being made by the state governments to inaugurate a wiser and a more economical educational administration of their higher institutions. Is it not possible in a great state like Iowa to find men who are educated, intelligent, public-spirited, ready to give the necessary time and thought, and yet who stand outside of active political relations? Can a politically elected governor be induced to appoint such a board?

These are questions which must be answered if the various schemes of coördination of state institutions are to come to any real fruition. Until a state can summon to the government of its state institutions a board of men not only intelligent, patriotic, and unselfish, but also free from political entanglements, no final solution is to be had. It is conceivable that even such a board as this might be overturned by a partisan appeal to the legislature, but it would, at any rate, have the courage of its convictions. It might be removed, but it would not lie down.

An extremely interesting factor in the Iowa fiasco is the action of the alumni. How far do institutions exist, and to what extent are they maintained, for the alumni who

have graduated from them? Is the future institution to be shaped in accordance with alumni tradition and sentiment, or from an impartial conception of the needs of the coming generations?

These questions are of much interest, because alumni not only in the state institutions, but in endowed institutions, are coming to have a growing share in their government; and it is noticeable that in almost every case where a disputed question of this kind has arisen, the attitude of the alumni has been determined upon purely sentimental grounds. In nearly all cases they have been stampeded by an appeal to college loyalty. Rarely have members of the alumni taken a judicial attitude. In this whole agitation in Iowa no alumnus, so far as it has been possible to learn, lifted his voice in favor of a calm, reasonable solution of the question upon the ground of the educational welfare of the state as a whole; and yet the very education which these alumni received at their institutions is supposed to train men for a judicial attitude toward public questions. It would be difficult to detect in this case any particular difference between the partisanship of these alumni and the partisanship of a labor union, whose members, as a rule, are not college men. Certainly, those responsible for the well-being of the state and for the wise and economical use of its resources are at least entitled to conclude that the action of the alumni of these institutions will generally be partisan, and that the alumni will look rather toward the past than toward the future.

In contrast with this experience the result achieved in the state of Indiana in the unification of the institutions of higher learning is interesting. The arrangement came out of a simple agreement brought about thru the joint efforts of the state officials and the representatives of the institutions themselves. Indiana University dates back almost to the beginning of the commonwealth; Purdue University, like the Agricultural and Mechanical College of Iowa, is the outgrowth of the Morrill legislation. For many years the rivalry between the two was sharp. Wiser counsels at length prevailed. An arrangement was made under which the two institutions became supplementary without duplication of courses or wasteful rivalry. Indiana University consists of the college of liberal arts, the school of education, the school of law, and the school of medicine; Purdue contains the school of engineering and the school of agriculture.

It is also to be said that the responsibility for waste of money rests primarily on the legislative representatives, not upon the colleges. It is the business of the legislatures to know whether money is being wasted in undue duplication or not, and the primary responsibility for such waste rests with the legislature.

On the other hand, the spectacle of college representatives as active lobbyists before the legislature cannot fail to have a far-reaching effect not only in Iowa but in other states. In taking such action the college man has followed the ordinary human bent. The opinion of the most honest and high-minded man necessarily becomes partial in a matter in which his direct and immediate interest is concerned.

The representatives of these colleges did not hesitate to plunge their institutions once more into the sea of party politics rather than accept a decision of their governing board which affected their immediate interests. In doing this they have assumed a heavy responsibility. One may well doubt whether a president or a dean or a professor or an alumnus is justified in seeking at such a price to overturn what he regards as an objectionable decision. The appeals to sentiment, to local prejudice, to the interests of rival towns, were all used to settle a question which was primarily educational. If for many years these institutions are to be subject to a political governance, the responsibility for it must lie with those who organized and carried the question into the legislature.

The financial cost and waste of university administration is one phase of the situation not likely to receive much attention, and yet it is becoming, not alone in state institutions but in all institutions of learning, an increasingly important question. An institution of learning grows like a government bureau—always by accretions. A department once begun may increase, but it is never abandoned, no matter how unsuccessful or useless it may prove to be. There is a lack, both in the government bureau and in the institution of learning, of that sort of administrative scrutiny which the modern industrial establishment receives repeatedly.

Exactly the same process goes on in a business organization as in a university. A new manager comes. He gathers his friends about him. They gradually become accustomed to their places and make themselves comfortable; departments enlarge; expenses increase; efficiency diminishes. After a while another manager comes into command. He goes thru this organization impartially and impersonally, consolidates departments here, cuts off expenditures there, and once more readapts the machinery of the establishment to do efficiently the work for which it was intended. A university or college never gets this sort of administrative revision. It is one of the problems of to-day to discover how to provide an administrative scrutiny which shall respect the dignity and the rights of the teacher's calling, and at the same time eliminate inefficiency and waste. Only in this way will educational expenditure ever be restricted. No government bureau, no college department, is ever reduced or consolidated with the approval of those who conduct it. The Iowa State Board of Education undertook to carry out such an administrative reform. Its plan was completely defeated, and in the main by an appeal to sentimental considerations far removed from the educational questions involved. But these questions still remain, and some time or other the state must decide what limit shall be set to the educational expenditures for higher education, and must find some method of determining whether the present expenditures are reasonable and the present organization wise.

By far the most serious outcome of this experience, for the legislature and for the people of the state alike, lies in the confusion of the public mind as to the real educational problem which the state needs to meet. This problem is not chiefly that

of higher education. Higher education in Iowa, as in most of our states, is relatively overdone. It would flourish in fair measure if the state did not support it at all. The partisan influences that have been aroused by the fight of the three institutions against the board creates a false perspective in education, and seems to put the emphasis of the state's educational obligation in the wrong place. This is the most serious outcome of the situation. Even the waste of money is a minor evil in comparison. If the state is willing to spend its money in maintaining two competing engineering schools, the state after all is rich and can afford such an extravagance. But the great and serious task of education in Iowa, which is the state's primary duty, does not lie with these three colleges, important as they are. The supreme duty and opportunity in Iowa lies in the development of the elementary and secondary schools of the whole state, and in particular in the development of the rural schools. To put in every rural community an effective school, to set going in these schools a rational, wholesome course of study which shall touch the lives of the pupils, to supply to these schools an adequate body of competent, earnest teachers, to create over this system of schools an administrative organization which shall be helpful, sympathetic, and discriminating,—this is the problem of education in Iowa, and the one to which the state needs to give its thought, its energy, and its support. Here is where good organization and sound educational oversight will count most. And the problem of higher education should be dealt with not as separate and distinct from this, but as a part of it.

Unfortunately it is not easy for the legislator, however good his intentions, to visualize this great cause in comparison with the concrete and definite claims of the contending colleges. No alumni associations, no commercial clubs, no presidents or deans or professors besiege the legislature and the legislative committees in behalf of these thousands of country schools. But in them the future of Iowa is to be wrought out. To provide for them an intelligent and effective organization and oversight is the greatest problem before the state. The most serious harm which the spectacular revolt of the three Iowa colleges against the Board of Education is likely to produce lies in the confusion of the public mind as to this fundamental educational duty. To overturn an unpopular board and deal directly with the legislative body may be glorious, but it is not education. The true educational interest of the state lies along another road.

IOWA'S PROBLEM OF EDUCATION

There are in Iowa some 12,500 public schools aiming to teach approximately half a million pupils. These are conducted by some 27,000 teachers, of whom nine-tenths are women. The great majority of these schools are in rural communities. The average pay of the rural school teacher is about \$9 a week. It is in these schools and by these teachers that the future of Iowa is to be determined.

And what is the problem with which these schools must struggle? Briefly it is this.

Altho Iowa is preëminently an agricultural state, the rural population is diminishing and there is a steady migration to the towns and to the cities. This is particularly true of the native-born. More and more the farms are being run by absentee landlords; the average size of a farm has increased in the last decade instead of diminished; social conditions in the country are becoming steadily more difficult. The countryside church is finding it harder to keep its footing.

There are many reasons for this, but one thing is clear: that the influence of the state system of education has hitherto accentuated this movement. Even the rural schools have been strongly under the domination of the college. The form of education which they have given has had little connection with the life and the surroundings of a farm population. It tended to make engineers, clerks, typewriters, scientific agriculturists, and motormen, but seldom to make farmers. It touched the social life only remotely. The whole trend of the education provided by the state, even in the remote rural school, has been to take boys and girls away from the farm to the city.

It is quite true that in recent years what might be termed palliative courses have been added to the schools looking toward a different ideal, but the problem which the state must face thru its school system in the country is something much larger than the mere teaching of agriculture or stock raising. The school must not only teach the boy and the girl better farming, but it must also teach them better business. It must teach them how farmers may coöperate to organize their business, how they may market their products, and thru the associations thus formed it must develop enough social life to appeal to the universal human desire for companionship. The technical teaching of better farming is the mere beginning of the work. It is the thread upon which must be hung business education, training in coöperation, and thru this coöperation the creation of a social régime which may satisfy the social hunger of men and women. Unless the state can solve this problem, another half century will find its farms tilled by an alien population.

For this work the state has no agency at hand save the school system, but as the schools stand to-day, they are disassociated units; there is no adequate oversight at the top; there is no well-thought-out policy; there is no organization capable of dealing with the whole school system in such wise as to make an intelligent effort to solve the problem. In the last report of the state superintendent of Iowa Mr. Deyoe has called attention to these conditions in strong terms, and he has pointed out the entire inadequacy of the State Department of Education, under its present limitations, to deal with this problem. The importance of his words cannot be overestimated. To create an organization and to set in motion a policy which shall deal intelligently with the children of the rural schools of Iowa, which shall turn their faces toward the problems of their own environment, which shall teach them not only better farming but better business, and thru the teaching of better business shall give the power for coöperation and for social cultivation,—to do this is to deal with the great problem of education with which Iowa is concerned. This problem the state has as yet not faced.

When one turns from the public schools to consider the field of higher education in the state, a different situation presents itself, but one equally confused. To the cause of higher education the state has contributed liberally, but in such manner as to add to this confusion rather than to clarify it, because here again there has been no consistent or well-thought-out policy.

There are in Iowa forty so-called colleges and universities. In these colleges and universities there are at present enrolled something over 13,000 students, a registration which would equal six college students to every 1000 of population. This is about double the college attendance in the oldest of the New England states most devoted to higher education. If it represented true college registration, the youth of Iowa would show a devotion to college life unequaled in any part of the world. The insincerity of the situation, however, is at once apparent when one examines the catalogues of the institutions themselves and finds that 6600 of these registered students—almost exactly one-half—are, under the very generous interpretation of the institutions themselves, preparatory students. How many would be entitled to registration as college students under a reasonably strict construction it would be impossible to determine without an examination of each registration card.

Of these forty institutions three are supported and controlled by the state, and their total registration includes over one-half of the total attendance. The other colleges and universities are mainly denominational. One denomination alone undertakes to conduct six colleges or universities in the state.

It goes without saying that forty colleges in the state of Iowa are far more than are needed or than can possibly find support. As a result there has gone on for years a scramble for students on the part of both the state and the denominational institutions. College catalogues have been swelled with names in order that the large registration might appeal to the public. I recently asked the president of a good college in Iowa, which has some 200 college students, why he did not drop the secondary students and the other special groups whose presence complicated and rendered the college work less effective. His reply was that the names thereby brought into the catalogue doubled the registration and, he added, the public in Iowa has been so educated that nobody would have any respect for a college which had a registration of only 200 students! In a word, higher education in Iowa is a field where denominational, institutional, and personal ambitions have their fullest play. Under these conditions even the best colleges are sorely tempted to bid for students upon unworthy grounds, and the weaker ones can live only by such means. Each college has its press bureau and field agents. Students are enlisted to bring recruits who ought to remain in their high schools. Many are tempted into college whose preparation for life should be sought elsewhere. The situation is much like that of the rich man in the Bible who issued dinner invitations, and when they were not accepted, went out into the by-ways and brought in the halt and the lame and the blind. Nowhere in any country of the world are such artificial means adopted to get boys and girls into college.

Over all this confusion the state itself exercises no authority from any disinterested, thoughtful source. Each state institution is a law unto itself and bids for students by any means it may choose to adopt. The colleges upon private foundation may invite students by all sorts of means without any intervention on the part of the state to inform the possible student as to the flimsy character of the instruction. Worst of all, without much thinking over the matter, the colleges have been allowed to bring a pressure to bear upon the lower schools that has changed their whole point of view. Any elementary school which fails to interest its students in the problems of their environment is a failure, and for the failure of our elementary schools in this respect the colleges are much to blame. They have pointed the elementary school in the wrong direction.

Aside from all this, the public seldom appreciates what sacrifice of the college boy or girl is made by introducing into a college group students who are ill-prepared. The real reason for the existence of a college rests upon the idea that in it are brought together youths whose intellectual preparation is approximately the same. Only in such groups can college instruction be made effective. The moment a considerable percentage of unprepared students is introduced, the whole character of the instruction changes. To conduct a college or a university without reasonable and fairly enforced standards of admission is practically to abandon the thing for which the college and the university stand and to sacrifice the interests of the fit to an effort to carry forward bodily the unprepared.

The matter of college standards of admission is one of great confusion in the popular mind. While it is indefensible to conduct a college or a university without the enforcement of such standards, it does not at all follow that the adoption of high standards of admission will be appropriate to another kind of institution. There can be no question that the enforcement of high standards of admission in the colleges of agriculture has limited to a great degree their usefulness.

Consider for a moment the problem of agricultural life, to which allusion has just been made. If this problem of better farming, better business, and better living is to be worked out for a state like Iowa, the education of a few hundred men on a college basis as scientific agriculturists cuts but a small figure. Even the additional empirical training in better farming which may be given to some hundreds of farmers is but a step toward the solution of the problem. There must be trained not hundreds, but tens of thousands of young people in the fundamental principles of farming, in the business which has to do with farming, and in the coöperation which must be brought about in order to make life on the farm profitable and livable. An agricultural college with high entrance requirements and small annual output of specialists is an insignificant factor in the solution of this problem. For any great commonwealth to undertake to solve its problem of agricultural development by this agency alone is like trying to sweep back the waters of the ocean with a broom. To make the case even more hopeless, the agricultural colleges have generally devoted the greater part of

their effort to engineering, not to agriculture. If the high-class agricultural college is the only agency that the state can find to deal with the problem of rural life, we may confidently expect that the farms of our agricultural states will become less and less productive and that rural life in those states will become more and more barren. Granting all that may be said in favor of the admirable work that these institutions have done, it still remains true that, as an agency for the training of farmers and the solution of farm problems and the preparation of a farm population for its life, the agricultural college can be but a single factor. To put it forward as the essential and vital agency is like founding a university without any elementary or secondary schools to make it effective.

The truth is that when the Morrill grants put into the hands of the states these large sums of money, the states were themselves not ready for agricultural education. The country was new. Agriculture in most parts of the United States was in that flush of youth when the soil was rich and fertile and the problems of agricultural organization and cultivation had scarcely come to be studied. Nobody had thought out any program of instruction for the training of men for the farm. The economic conditions in agriculture had not begun to press. Since that day the industrial organization of the world has changed. The movement to the cities has been enormously accelerated, and to-day we stand facing a situation in which the agricultural college with high entrance requirements may indeed play a part in the solution of the great problem, but only as a part of a larger plan.

It is worth while to contrast the history of a state like Iowa in its experiment of a high priced agricultural and engineering college together with the existing emigration from the land which we see going on to-day, with another experiment in another country whose population is approximately the same as that of the state of Iowa. In Denmark,¹ after the war of 1864, in which the kingdom lost its richest provinces, the patriotism of the people was keenly touched and they developed a new form of education as a means of rehabilitating their farming industry and making the farming population more patriotic and more contented. While Denmark has

		IOWA	DENMARK
¹ Area—square miles		56,025	14,829
Population	1890	1,912,297	2,185,385
"	1900	2,231,853	2,449,540 (1901)
"	1910	2,224,771	2,767,076 (1911)
Loss thru migrations	1910	277,062 (12.4 %)	8,890 (.3 %)
Percentage of land under cultivation	1899	73.5 %	75 to 80 %
	1909	69.1 %	
Acreage under cultivation		20,374,925 (1909)	4,850,000 (1908)
Average size of farms (acres)		166	18
CROPS (IN BUSHELS)			
	IOWA	DENMARK	
	1899	1900	1912
Wheat	22,769,440	8,055,944	4,328,203
Barley	18,059,060	10,964,184	20,366,646
Oats	168,364,170	128,198,055	39,914,039
Potatoes	17,305,919	14,710,247	28,020,323
Corn		341,750,460	
Beets and other Roots			413,743,000

a population about equal to that of the state of Iowa, its area is only one-fourth as large. Instead of developing a single institution with high entrance requirements, they developed a great number of institutions with practically no entrance requirements. These People's High Schools are a reflection of the life of the communities in which they stand. There are over forty of them in this small country. No farmer has to go more than a few miles from home to attend one of them. The courses are of five months' duration. The boys and men attend in the winter session, the women and girls in the summer session. Students are of all ages. There are no examinations, no entrance requirements, no text-books, no degrees. The only condition is that the student shall be eighteen years old, and that he shall be able to read his native language well and know the most elementary arithmetic.

The courses in the schools include thoroughgoing instruction in the mother tongue; next to this are bookkeeping and elementary business methods of commerce; the most practical instruction in dairying, in plant culture, in stock judging, and poultry breeding, and above all in the management of coöperative associations. The teaching of coöperation is the watchword of the educational policy. The total expenses, including board and residence for five months, are about \$40. Under this system there has been developed in thirty years a farming population the most intelligent, the most contented, and the most efficient in the world. All the results of modern science have been brought into the schools and quickly assimilated, but in the simplest form. The Danish farmers are said to read more than any other farmers anywhere. It is a tradition that the Danish farmer would rather do without his breakfast than without his daily newspaper. Under the system of coöperative instruction close relations have been established between the individuals of the community. The size of the average farm has steadily diminished. Tenancy has grown steadily less. At present 89 per cent of the farmers own their own farms. Coöperation is everywhere; and by selling direct to the consumer a farmer in any part of Denmark is independent of the middleman. Above all, there has been worked out here a system of education which, in the first place, teaches men to think, in the second place to coöperate, and in the third place to find in the efficient and spirited exercise of rural vocations contented and useful lives. No such result has been achieved in any of our great agricultural American states. The Denmark plan has looked toward intimate coöperation, personal economy, and thrift as well as technical skill. Our American program has aimed almost wholly at technical skill. So far as its influence has been exerted at all upon the individual, it has had little effect in the development of personal thrift, business efficiency, or social contentment.

Is it possible for an American commonwealth to achieve what has been done in Denmark? Is it possible to establish once more ideals of economy, thrift, and simple social custom? This does not mean that exactly the same kind of school which has succeeded in Denmark will serve in Iowa. When one sees, however, the problem of agricultural education, of farm coöperation, and of farm business so completely solved in

a country like Denmark, it is fair to assume that Americans can learn something from the experiment.

He who believes profoundly in the genius and practical sense of the American people has no question of our ability to accomplish such a purpose, but he realizes also that it can be done only when the attention of a state can be withdrawn from the more spectacular forms of higher education and focused upon that fundamental problem upon whose solution our civilization depends. Our educational system in America is top-heavy. Higher education has been exploited by numberless irresponsible agencies. It has been too much the field of personal, institutional, and denominational ambition. The larger interests of the whole people have been obscured by efforts to serve local and temporary causes. The time has come not to strike a blow at higher education, but to demand that the institutions of higher education shall first of all be sincere, that they shall be honest, that their demands for money and support shall have some relation to that great fundamental problem of education which a democracy must solve if it is to endure or if its people are to be contented. We need first of all an educational perspective. We shall then be in a position to create an organization capable of harmonizing its different agencies and of bringing them into helpful coöperation.

The first practical step in Iowa is to establish an organization at the top, provided with the best educational leadership obtainable, to deal with education as a whole. At the present moment both the State Superintendent of Education and the State Board of Education are exercising powers that are likely to clash. The problem is too big to be solved at once, but is it not possible to take a single step—to provide an agency to deal with education as a whole? Freedom from political interference, freedom for the college president, the opportunity of each institution to work out its legitimate problem, and the development of wholesome rural life are likely to wait till some such step can be taken. For education in Iowa is one thing, not a congeries of disassociated and contending units.

IMPROVEMENTS IN THE FINANCIAL STATUS OF COLLEGE TEACHERS¹

IN 1908 the Foundation reported in its Second Bulletin the results of an enquiry concerning the financial status of the teaching staff of higher institutions in America and Germany. An examination of salary schedules for the year 1912-13 makes it possible to treat certain of the topics of that bulletin more fully and to measure the change in salaries during the past five years.

¹Based upon a study by Professor Edward L. Thorndike of Teachers College, Columbia University, of reports made by the institutions to the Foundation.

THE VARIABILITY OF SALARIES IN THE SAME INSTITUTION

A small institution performing a fairly unified educational service, such as giving instruction in the traditional academic subjects, or training engineers, or teaching law, may do its work conveniently with a staff of men graded rather sharply as, say, professors, assistant professors, and instructors, with a fixed salary attached to each grade or title. The teaching staff may even be on almost absolute financial equality, four-fifths of its members being "professors" and doing the work of teaching with here and there an assistant of lower title and salary.

Such simple fiscal arrangements were common a generation ago; they still persist in some of the older and smaller colleges; but they are now becoming obsolete, and no one can understand the financial statistics of our higher institutions by thinking of the teaching staff as sharply graded by a few academic titles, and of each title as significant of a given salary. Where there are professional schools, the salary attached to the title of professor may, in the same institution, range from \$500 to a maximum of \$5000, there being actually twenty-five different sums received as annual salaries by the full professors in a single American university. In this institution thirteen different sums, ranging from \$750 to \$4000, were received by persons who held the title of associate professor; fourteen different sums, ranging from \$1800 to \$3600, by assistant professors; and eighteen different sums, ranging from \$200 to \$2000, by instructors. There were also clinical professors, clinical instructors, and several other academic grades causing further variability, and within each of these grades there was a still further variability of its own.

Even where there are no professional schools, the variation of salary is very great. For example, in two institutions without professional schools nineteen different sums, ranging from \$2000 to \$5000, were received by professors; thirteen different sums, ranging from \$600 to \$1700, by instructors; and sixteen different sums, ranging from \$1000 to \$3000, by officers of intermediate grades. This variation is for the salaries of men—were women included, it would be greater. So far as could be ascertained, all of the salaries considered, except perhaps some of those for instructors, were for the full year's work of full-time teaching. There were both lower and higher salaries than those mentioned, but these were for exceptional conditions, as of part-time teaching or administrative work.

Both institutions illustrate the overlapping of academic grades with respect to salary. Over one-fourth of the teachers of intermediate grade receive salaries as high as, or higher than, the lowest full professor's salary; nearly one-fourth of the instructors receive salaries reaching or passing the lowest point for salaries of teachers of intermediate grade. Such overlapping is in no sense exceptional; in the larger institutions the fact that certain individuals of lower rank receive more salary than other individuals of higher rank is so frequent as to be almost the rule.

THE SALARIES OF THE TEACHING STAFF OF COLLEGES AND UNIVERSITIES IN 1912-13

Such variability of salary for the same academic grade, either by the separation into distinct salary steps or by a gradual ranging, together with the overlapping of academic grades in salary, make the financial statistics of higher institutions difficult to present and interpret without misleading. The difficulty is increased by the differences in practice between institutions and between the same institution in different years, with respect to the significance of a given academic rank. For example, associate professors may be far above assistant professors in dignity and salary in one institution and in another be substantially on a level with them. The average salary of assistant professors may appear to have been lowered between 1907-08 and 1912-13, when in reality such service was better rewarded than before by the addition of a higher intermediate grade or title for those performing this service, and the relegation of the title of assistant professor to those performing a different service. Other complexities are added by differences in policy as to the distribution of salaries within the same grade, differences in the services performed by different individuals of the same grade, and the like.

The only sound and adequate basis for a statement of the financial status of the teacher in a higher institution is a list of names, giving in each case salary, age, absence and pension rights, services performed, services permitted outside the institution, amount of training, and amount of experience in the institution and elsewhere. No college or university publishes such a list, and it is doubtful whether any governing board keeps such a systematic list, tho it is precisely these facts that a competent head of department or college president has in mind and combines with his knowledge of the teacher's scholarship, efficiency, and devotion in recommending financial provisions. It is a regrettable fact that at present we know far more about such topics as the relation of age to salary, or of length of experience to salary, in the case of elementary and high school teachers than in the case of college teachers. Indeed, the published facts for the last are practically limited to the survey made in the Bulletin of the Foundation to which reference has been made.

The first step obviously is to provide knowledge of the salaries that are actually paid, and this the Foundation is enabled to do, thru the courtesy of institutions in submitting their pay-rolls for study. As the common statements of average salaries give such imperfect and misleading notions, the detailed distribution of the relative frequencies of each salary has been studied.¹

¹ Some thirty group tables were made for the following colleges and universities: *Group 1*, Carleton College, Franklin College, and Ripon College; *Group 2*, Bates College, Clarkson School of Technology, Drury College, Grinnell College, Lawrence College, and Mount Holyoke College; *Group 3*, Drake University and Newcomb College (of Tulane University); *Group 4*, Beloit College, Centre College of Kentucky, Dickinson College, Hobart College, Marietta College, and Wabash College; *Group 5*, Hamilton College, Oberlin College, University of Pittsburgh, Tufts College, and Washington and Jefferson College; *Group 6*, Middlebury College, University of Rochester, University of Vermont, and Wellesley College; *Group 7*, Bowdoin College, Clark College, Indiana University, Purdue University, Swarthmore College, Trinity College (Connecticut), and Union College; *Group 8*, Dartmouth College, University of Missouri, and Worcester Polytechnic Institute; *Group 9*, Lehigh University, University of Minnesota, Tulane University, Washington University (Missouri), and Western Reserve University; *Group 10*, University of Cincinnati and

The facts as reported are not offered as infallible in every respect. The Foundation was unwilling to impose on the institutions concerned the burden of answering detailed questions; consequently a salary may occasionally be recorded as smaller than it really was (because the individual was on leave of absence for part of the year, or was in receipt of an added payment under another department), or as larger than it really was (because a payment recorded on the pay-roll in a second department was actually included in the first payment recorded). Some mistakes of copying in and from the pay-rolls and in further tabulations are probably inevitable. The facts reported give, however, a thoroughly trustworthy general picture of what they attempt to present.

The facts compiled are for salaries in 1907-08 as well as in 1912-13, permitting measurements of the rise of salaries as well as of the present status. They are arranged in four divisions, — salaries for instructors or tutors or whatever grade represents approximately the first rank of teachers with a full program, salaries for full professors, salaries for standard intermediate grades, and salaries for all of these grades combined. The salaries of assistants, or whatever grade represents approximately the work of men who are primarily students, are not included. The salaries of irregular grades, such as lecturer, which may carry an instructor's work or a part-time professor's work, or signify casual visits, or a dignified assistantship, are likewise excluded. Presidents are also excluded, but deans and directors of schools or departments are included. Teachers in medical schools, dental schools, and schools of pharmacy are also excluded, being more fitly made the subject of separate study. Payments for work in summer schools are excluded. The salary of a teacher in service for only one semester is recorded as it would be for a full year's service. The aim is to show the recompense given for what is a teacher's full service in any institution in question. Altho there are doubtless occasional failures to make the necessary distinctions precisely, the tables show the typical with adequate precision. In the salary scales, which form parts of the tables, \$400 means from \$350 to \$449, \$500 means from \$450 to \$549, \$600 means from \$550 to \$649, and so on.

Upon examination of Table I it will be seen that the institutions do not differ very greatly in the salaries given to instructors. We may, without serious error, group all these salaries for all institutions. The low-salaried institutions pay in the main from \$750 to \$1200, the others from \$750 to \$1500. It must be remembered that some of the instructors in the larger institutions included in these tables, tho carrying a full program of class teaching, are really of the apprentice type, engaged in study for a higher degree. The instructor in these colleges is somewhat better paid than the male teachers in American high schools. The median salary for the latter

Vassar College; *Group 11*, Amherst College, University of Virginia, and Williams College; *Group 12*, Cornell University, University of Michigan, and University of Wisconsin; *Group 13*, Case School of Applied Science, Rensselaer Polytechnic Institute, and Stevens Institute of Technology; *Group 14*, University of California, Massachusetts Institute of Technology, and University of Toronto; *Group 15*, Johns Hopkins University, Leland Stanford Junior University, Princeton University, and Yale University; *Group 16*, Columbia University and Harvard University. None of these group tables is here published, but the Foundation will be glad to make them available to scholars.

is \$900; the average salary, little if any over \$1000; and the proportion of salaries at \$500 to \$900 much greater. It is perhaps worthy of mention that the salaries of the mechanics employed in university shops and laboratories are distinctly below the average instructor's salary in the same institution. Fuller analysis of the financial status of the instructor must be delayed until enough individual life-histories of college teachers are available to permit the correlation of salary with age, experience in teaching, and amount of education received in preparation for teaching.

In the salaries attached to intermediate grades, associate professors, and assistant professors, institutions differ more widely. The gradation is rather steady, so that any grouping of the institutions has to be somewhat arbitrary, and its results are necessarily less instructive. There are groups of institutions with average salaries for the intermediate grades of \$1200 to \$1400; with average salaries of \$1488, \$1537, and \$1571; with average salaries of \$1747 to \$2076; and lastly the Harvard-Columbia group with average salaries still higher.

These summaries appear in Table II. There are no clear "species" of teachers in this grade from the fiscal point of view. By reason of age, ability, and differences in the significance of the titles concerned, the salaries spread from \$1000 to \$4000 with no close grouping around specially frequent salaries, save perhaps around \$1500 for the colleges of moderate salary-schedules. If the grade of associate professor had been kept separate throughout, there would have been a somewhat, but not much, closer clustering around central points in the case of either grade. In the case of Columbia and Harvard, where the grade of associate professor is distinctly superior in salary, there would be a fairly pronounced influence of this sort.

We may say roughly that the teachers in intermediate grades in the smaller institutions are financially in a class with the instructors in institutions like Columbia, Harvard, Yale, Hopkins, Stanford, California, and Princeton. How often they are, like these latter, young men proving their worth, and how often they are mature men whose achievements have not been such as to put them ahead financially, is a question to be settled only by proper measurements of the correlation of age with salary. The teachers in intermediate grades of institutions like Oberlin College get from \$1200 to \$1800, and represent gifted young men, somewhat older men waiting for fairly assured promotion, and still older men who have nearly or quite reached their salary limit as college teachers. The 890 teachers in intermediate grades in institutions like Dartmouth College or the University of Minnesota represent the group of assistant professors whose status has been studied by Professor Guido Marx, plus a financially superior group of junior professors and associate professors in large institutions.

In the case of the full professors, we have in Table III the story of the salaries of mature men and women, accepted as teachers of the highest rank, in sixty-one insti-

tutions. This fairly represents the status of the full professor in the hundred and fifty better higher institutions of America.

There is a certain significance in the combined facts for the salaries of all these full-time teachers of accepted standing in the higher schools of America, which are shown in Table IV, altho in this table all ages and all of the institutions are mixed. The significance lies in the possibility of easy comparison with similar facts for other professions or branches of civil service, and of easy contrast with salaries in industrial and commercial organizations. One such comparison with the salaries of men teachers in public high schools of the United States is made in the table itself.

TABLE I
THE SALARIES OF INSTRUCTORS IN 1912-13

Annual Salary	In Group A ¹		In Group B ²		In Group C ³		In all institutions combined	
	Gross frequency	Percentile frequency	Gross frequency	Percentile frequency	Gross frequency	Percentile frequency	Gross frequency	Percentile frequency
\$400	1	.9					1	.1
500	2	1.7	1	.1	1	.3	4	.3
600	3	2.6	5	.6	6	1.5	14	1.0
700	2	1.7	24	2.8	6	1.5	32	2.3
800	14	12.0	68	7.9	22	5.5	104	7.5
900	11	9.4	66	7.6	11	2.8	88	6.4
1,000	40	34.2	219	25.3	90	22.6	349	25.3
1,100	10	8.5	112	13.0	16	4.0	138	10.0
1,200	22	18.8	142	16.4	68	17.1	232	16.8
1,300	2	1.7	81	9.4	41	10.3	124	9.0
1,400	7	6.0	87	10.1	39	9.8	133	9.6
1,500	1	.9	40	4.6	54	13.6	95	6.9
1,600	2	1.7	8	.9	15	3.8	25	1.8
1,700			4	.5	5	1.3	9	.7
1,800			1	.1	10	2.5	11	.8
1,900			2	.2	1	.3	3	.2
2,000			2	.2	12	3.0	14	1.0
2,100								
2,200			1	.1			1	.1
2,300			1	.1			1	.1
2,400								
2,500			1	.1	1	.3	2	.1
Number of individuals	117		865		398		1,380	
Average salary	\$1,027		\$1,121		\$1,238		\$1,147	
Median salary	\$1,000		\$1,100		\$1,200		\$1,100	

¹ Group A includes Carleton, Franklin, Ripon, Bates, Clarkson, Drury, Grinnell, Lawrence, Mount Holyoke, Drake, Newcomb, Beloit, Centre, Dickinson, Hobart, Marietta, Wabash, Hamilton, Oberlin, Pittsburgh, Tufts, and Washington and Jefferson.

² Group B includes Middlebury, Rochester, Vermont, Wellesley, Bowdoin, Clark (Collegiate), Indiana, Purdue, Swarthmore, Trinity (Connecticut), Union, Dartmouth, Missouri, Worcester Polytechnic, Lehigh, Minnesota, Tulane, Washington (Missouri), Western Reserve, Cincinnati, Vassar, Amherst, Virginia, Williams, Cornell, Michigan, Wisconsin, Case, Rensselaer, and Stevens.

³ Group C includes California, Massachusetts Institute of Technology, Toronto, Johns Hopkins, Leland Stanford, Princeton, Yale, Harvard, and Columbia.

TABLE II

SALARIES OF COLLEGE TEACHERS OF INTERMEDIATE GRADE IN 1912-13

ASSOCIATE PROFESSORS, ASSISTANT PROFESSORS, AND PRECEPTORS; JUNIOR PROFESSORS IN THE UNIVERSITY OF MICHIGAN

Annual Salary	<i>In institution groups in which the average salary for this grade is \$1,200 to \$1,400¹</i>		<i>In institution groups in which the average salary for this grade is \$1,488 to \$1,561²</i>		<i>In institution groups in which the average salary for this grade is \$1,747 to \$2,076³</i>		<i>In Columbia and Harvard Universities</i>	
	<i>Gross frequency</i>	<i>Percentile frequency</i>	<i>Gross frequency</i>	<i>Percentile frequency</i>	<i>Gross frequency</i>	<i>Percentile frequency</i>	<i>Gross frequency</i>	<i>Percentile frequency</i>
\$800	1	1.6						
900								
1,000	5	7.9	2	1.5	6	.7		
1,100	6	9.5	2	1.5	2	.2		
1,200	17	27.0	16	8.6	17	1.9		
1,300	9	14.3	10	5.3	12	1.3	1	.6
1,400	11	17.5	22	11.3	13	1.5		
1,500	6	9.5	59	31.5	113	13.7	2	1.3
1,600	5	7.9	29	15.5	89	10.0		
1,700	8	4.8	14	7.5	49	5.5		
1,800			21	11.3	122	13.7		
1,900			1	.5	39	4.4	2	1.3
2,000			8		200	22.5	20	13.5
2,100			1	.5	13	1.5	2	1.3
2,200					37	4.2	17	10.6
2,300					30	3.4	4	2.5
2,400					32	3.6	5	3.1
2,500			1	.5	65	7.3	29	18.1
2,600			1	.5	6	.7	10	6.3
2,700				.	9	1.0	2	1.3
2,800					8	.9	1	.6
2,900					2	.2	1	.6
3,000					25	2.8	38	23.8
3,100								
3,200							1	.6
3,300							3	1.9
3,400								
3,500						.1	12	7.5
3,600							1	.6
3,700								
3,800							1	.6
3,900								
4,000							7	4.4
4,400							1	.6
Number of individuals	63		187		800		160	
Average salary	\$1,300		\$1,544		\$1,924		\$2,648	
Median salary	\$1,300		\$1,500		\$1,900		\$2,500	

¹ Including the colleges in groups 1 to 4. See note on page 100.² Including the colleges in groups 5 to 7. See note on page 100.³ Including the colleges in groups 8 to 15. See note on page 100.

TABLE III

THE SALARIES OF FULL PROFESSORS IN 1912-13

FREQUENCIES OF EACH SALARY AMOUNT IN SPECIFIED GROUPS OF INSTITUTIONS

Annual Salary	In Carleton, Franklin, and Ripon	In Bates, Clarkson, Drury, Grinnell, Lawrence, and Mount Holyoke	In Drake, Newcomb, Beloit, Centre of Ky., Dickinson, Hobart, Marietta, and Wabash	In Hamilton, Oberlin, Pittsburgh, Tufts, Washington, and Jefferson, Middlebury, Rochester, Vermont, and Wellesley	In Bowdoin, Clark College, Indiana, Purdue, Swarthmore, Trinity (Conn.), and Union	In Dartmouth, Missouri, Worcester Polytechnic, Lehigh, Minnesota, Tulane, Washington (Mo.), and Western Reserve	In Cincinnati, Vassar, Amherst, Virginia, Williams, Cornell, Michigan, Wisconsin, Case, Rensselaer, and Stevens	In California, Massachusetts Technology, and Toronto	In Johns Hopkins, Stanford, Princeton, and Yale	In Columbia and Harvard	Frequencies in all institutions combined, scaled by steps of \$500		
												Gross	Percentile
\$800			1								\$750		
900			1								to 1,249	12	.8
1,000													
1,100													
1,200	8	1	1										
1,300	1	2		1									
1,400	7	3	2	1							1,250		
1,500	2	12	13	4	5	2					to 1,749	147	9.3
1,600	2	16	1	5	2								
1,700	1	28	35	2									
1,800	3	5	21	14	4	3		1			1,750		
1,900			6	4							to 2,249	227	14.3
2,000	2	5	2	64	16	10	2	1	3				
2,100				9	7	1			1				
2,200			2	24	1	15		1					
2,300			1	4	13	10	3	2	1				
2,400			2	4	13	19	1				2,250		
2,500		1	3	21	42	11	44	6	12		to 2,749	298	16.8
2,600				2	1	10	1	1		4 under \$3000			
2,700			3		12	10	7	2	2				
2,800				4	12	11	6	1					
2,900					19	7					2,750		
3,000			1	6	5	25	77	18	38	3	to 3,249	286	18.1
3,100				1	1	10							
3,200					1	4	33		1				
3,300						4	24	7	2				
3,400			1		2	2			3		3,250		
3,500					1	5	67	8	25	8	to 3,749	205	13.0
3,600				1		18	4	16	2	3			
3,700						2							
3,800							6	1	2	1			
3,900						2	2				3,750		
4,000					1	8	32	37	63	35	to 4,249	194	13.3
4,100						1	2						
4,200									1				
4,300							1	1					
4,400						1			1	2	4,250		
4,500						1	7	3	22	27	to 4,749	67	4.2
4,600										1			
4,700													
4,800											4,750		
4,900											to 5,249	95	6.0
5,000						5	3	8	34	44			
5,100										1			
5,200										1			
5,300										1			
5,400									3	34	5,250		
5,500											to 5,749	40	2.5
5,600													
5,700										1	5,750		
5,800											to 6,249		
5,900													
6,000							3		1	21		25	1.6
Over 6,000									1	17	Over 6,250	18	1.1
											1,582 individuals Median salary \$3,000		

TABLE IV
THE DISTRIBUTION OF THE SALARIES (1912-13)
OF THE 4262 INSTRUCTORS, ASSISTANT PROFESSORS, ASSOCIATE PROFESSORS, AND
PROFESSORS IN THE 61 INSTITUTIONS COMBINED

Salary	Frequency			Totals	Totals expressed in percentages	Similar per- centages for male teachers in public high schools in 1908 (approximate)
	Instructors	Teachers of Intermediate Grades	Full Professors			
Under \$750	51			51	1.2	30.5
\$750 to 1,249	911	74	12	997	23.4	44.3
1,250 to 1,749	386	447	147	980	23.0	15.0
1,750 to 2,249	29	483	227	739	17.3	7.1
2,250 to 2,749	3	194	266	463	10.9	3.1
2,750 to 3,249		76	286	362	8.5	1.6
3,250 to 3,749		17	205	222	5.2	.5
3,750 to 4,249		9	194	203	4.8	
4,250 to 4,749			67	67	1.6	
4,750 to 5,249			95	95	2.2	
5,250 to 5,749			40	40	.9	
5,750 to 6,249			25	25	.6	
Over 6,250			18	18	.4	
Number of individuals	1,380	1,300	1,582	4,262		

THE RELATION OF SALARY TO AGE

An adequate treatment of the relation of salary to age requires the fiscal history of individual teachers. To infer the changes in salary due to age from the differences found between the salaries of groups classified by age is unsafe, since those who abandoned college training for other occupations at any age are very likely to differ as to salary from those who remain, and since we cannot assume that the ability of those entering college teaching has remained constant during the forty years past. The Foundation hopes to give the topic such adequate treatment in the future. The present section reports only measures of the variation of salary at the same age for certain groups,—a limited and not exactly representative selection from college teachers of 251 men, all teachers of mathematics or the natural sciences in certain universities, who had been active enough in science by the year 1910 to be included in the second edition of Professor Cattell's *American Men of Science*. The choice of these was dictated by practical exigencies and the results must not be taken strictly at their face value, altho the use made of the facts has been kept free from fallacies due to the nature of the selection of these individuals. The selection is such as to exclude men of all ages of slight scientific achievement and to exclude somewhat more strictly the youngest. Also, as stated, it is a selection of men from, on the whole, a superior group of institutions.

In general, we have a fairly steady rise in salaries from the group of age 34 with

a median salary of \$1800, thru age 36 at \$2000, age 38 at \$2200, age 40 at \$2500, age 42 at \$2200, age 45 at \$2850, to \$3200 at age 49, and \$3300 at age 53. For the reasons stated, this result should be used with caution. What is certain is that the effect of age within these limits is real, large, and more persistent to later ages than probably would have been assumed *a priori*.

There is an interesting difference in salary and in the relation of age to salary between the men who were rated in Professor Cattell's list of the 1000 most esteemed as scientific workers and those who were less distinguished. In salary the more distinguished group have an advantage of about \$800 at ages 36 and 38, about \$1000 at ages 40 and 42, about \$1500 at ages 44 and 46, and a still greater advantage at later ages. The median salary for the distinguished group rises from about \$3000 at ages 36, 38, 40, and 42, to \$3500 at ages 44 to 46, \$4000 at ages 48, 50, 52, and 54, and \$5000 at higher ages; while the median salary for the others remains at approximately \$2000 thru ages 36 to 46, and is only \$2500 and \$2650 in the case of ages 48 to 54 and 56 and over. These figures are from too few cases to be used as precise measures of the differences in question, but are adequate to prove that ability as estimated by one's fellow scientists receives very substantial recognition in salary, and that, as in other professions and in industry and commerce, the less gifted men reach their maximum salary much earlier than the more gifted.

The variation in salaries for the same age is, as students who have made the matter a subject of careful observation and thought would expect, very wide. Men not over two years apart in age differ in respect to salary to such an extent that the highest salary is about four times the lowest. The intervening salaries are spread fully over the scale. Men receiving \$2000 may be from under 30 to over 60 years old, and men can be found with that salary at every intervening age. The effect of more complete and more exactly representative data would be to increase the range of variation. This variation, it may be added, is a sign of healthy adaptation to the wide differences in energy, scholarship, and devotion which must be expected even within such a picked group of men as college teachers.

THE APPRENTICESHIP SYSTEM IN AMERICAN HIGHER INSTITUTIONS

The higher institutions of America maintain an elaborate system of apprenticeship by their provision, fiscal and otherwise, for assistants, readers, teaching fellows, and the like, who do educational work under more or less close supervision, generally as part-time workers who are studying for a degree, or who have just completed such study and are maintaining financial independence while waiting for engagement as full-time teachers.

The extent of this apprentice work in the larger institutions may be estimated from the fact that in Columbia, Harvard, Chicago, Michigan, Yale, and Cornell there are reported 761 individuals with the title of assistant, more than the number of

full-time professors in these same institutions. Some few of these are full-time teachers or scientific workers of experience,¹ but there are, to much more than counter-balance these, teaching fellows and young men with the title of instructor who are really apprentices.

The system is by no means confined to the large universities. Taking at random ten institutions of moderate size (Vassar, Indiana, Purdue, Oberlin, Cincinnati, Armour Institute, Virginia, Washington, Western Reserve, and Brown), we find reported 237 assistants to 321 full professors. Moreover, there probably are other student assistants unreported because receiving only free tuition.

Even in the small institutions, much of the educational work is done by, and much practical training in college teaching is given to, such apprentices. Again taking ten colleges at random (Lafayette, Bowdoin, Colorado College, Dickinson, Adelphi, University of South Carolina, Goucher, Trinity (Connecticut), Beloit, and Washington and Jefferson), we find reported 72 assistants to 157 full professors. Fifty-two of these were reported from a single institution, but, on the other hand, the student-assistants who were given tuition or tuition plus a hundred dollars or so were probably very often left unreported by other institutions in this group.

The fiscal status of these apprentices will not be described here, since any tables of salaries or changes in salaries for them are likely to be misleading unless worked out and presented in connection with fairly exact descriptions of the services which they perform and the training which they receive. These services range from the actual conduct of class-room and laboratory instruction to the mere correction of minor written exercises, or even to work as errand boys, keeping class-rolls, answering the telephone, and fetching apparatus. In time required they vary so much that an assistant's pay probably would show a range of from fifty cents per hour to five times as much. The training ranges from such sympathetic guidance as a son might receive in a model father's office to the mere orders and criticisms that an ordinary office boy gets.

It is probable that four out of five of the men and women now entering college and university teaching hold such positions as paid assistants for a year or more. Consequently the organization and remuneration of the work attached to assistantships offers important problems to the scientific student of administration. At its best an assistantship means self-support while advancing in knowledge and professional training for the assistant, equally good instruction for the classes in question, relief for the professor who can devote himself to work that he prefers, tho it is in the popular sense much harder to do, and economy for the fiscal authorities who are enabled to pay certain services no more than efficiency requires.

¹ In departments of agriculture especially, subordinate scientific workers with salaries of from \$800 to \$1500 are often given the title of "assistant."

THE CHANGE IN THE SALARIES OF TEACHERS IN HIGHER INSTITUTIONS

The salaries of instructors have shown a clear increase during the past five years. There has been an average gain of \$80. This gain has been caused by a decrease in the proportions of salaries of \$1000 and under and an increase in the proportions of salaries of \$1050 and over. The increase has been greatest in the groups of institutions paying on the average under \$1000 in 1907-08. The gain for these averages \$118, and their median salary has moved up from \$900 to \$1000. The gain has been least in the institution groups which had the highest salaries in 1907-08, except Harvard and Columbia, being \$63 for the combined group including California, Massachusetts Institute of Technology, Toronto, Johns Hopkins, Stanford, Princeton, Yale, Harvard, and Columbia, and much less if Harvard and Columbia are excluded.

Table V gives the percentage of instructors receiving less than \$650, the percentage receiving from \$650 to \$849, the percentage receiving from \$850 to \$1049, and so on, both for 1907-08 and for 1912-13. It will be seen that all the low salaries have decreased in relative frequency, while all the high salaries have increased.

TABLE V
CHANGE IN INSTRUCTORS' SALARIES
ALL INSTITUTIONS COMBINED; COARSE GROUPING

Salary	Percentile frequencies		Differences
	1907-08	1912-13	
<i>Under \$650</i>	2.6	1.4	- 1.2
\$650- 849	13.0	9.9	- 3.1
850-1,049	42.6	31.7	-10.9
1,050-1,249	23.6	26.8	+ 3.2
1,250-1,449	10.8	18.6	+ 7.8
1,450-1,649	6.2	8.7	+ 2.5
1,650-1,849	.7	1.4	+ .7
1,850-2,049	.5	1.2	+ .7
2,050-2,249		.1	+ .1
2,250-2,449		.1	+ .1
2,450-2,649	.1	.1	0

The change in the salaries paid to teachers of intermediate grades is complex and difficult to express. In the institutions paying in 1907-08 in most cases from \$1000 to \$1500, clustered around an average of about \$1200, there has been an average gain of about \$200. This gain concerns positions filled by 110 individuals in 1907-08, and by 161 in 1912-13. In Harvard and Columbia, at the other salary extreme, there has been an average gain of \$226. Here 116 and 160 positions were concerned in 1907-08 and 1912-13, respectively. The remaining institutions, with 660 positions for 1907-08 and 979 for 1912-13, show an average gain of about \$120, the gain being closely the same whether an average of \$1500, \$1600, \$1700, \$1800, or \$2000 was paid in

1907-08. The intermediate grades have then made most improvement in the institutions which in 1907-08 paid the very low or the very high salaries.

The general change is shown in Table VI, which gives the percentages (in 1907-08 and in 1912-13) of teachers receiving each salary amount. The grouping shows with special clearness the decrease in relative frequency of salaries below \$1500 and the increased relative frequency of salaries above \$1850. The change has been an advance all along the line, not the mere bringing of very low salaries up to a higher standard, nor the addition of certain high-priced positions.

TABLE VI

THE CHANGE IN SALARIES OF TEACHERS OF INTERMEDIATE GRADES FROM 1907-08 TO 1912-13
ALL INSTITUTIONS COMBINED; COARSER GROUPING

Salary	Percentile frequencies		Differences
	1907-08	1912-13	
<i>Under \$950</i>	.4	.1	- .3
<i>\$950-1,249</i>	11.6	4.8	- 6.8
<i>1,250-1,549</i>	23.7	19.8	- 3.9
<i>1,550-1,849</i>	25.9	25.7	- .2
<i>1,850-2,149</i>	20.1	22.0	+ 1.9
<i>2,150-2,449</i>	6.1	9.6	+ 3.5
<i>2,450-2,749</i>	8.2	9.5	+ 1.3
<i>2,750-3,049</i>	2.6	5.8	+ 3.2
<i>3,050-3,349</i>	.4	.3	- .1
<i>3,350-3,649</i>	.2	1.1	- .9
<i>3,650-3,949</i>	.1	.1	0
<i>3,950-4,249</i>	.4	.6	+ .2
Number of individuals	946	1,300	

The salaries of full professors in these institutions have been increased on the average by about \$225, the increase being about the same for institution groups paying salaries, in 1907-08, of \$1200, \$1400, \$1600, \$1800, \$2200, \$2700, or \$3000. The institution groups paying average salaries (in 1907-08) of \$3500 and \$3750 show smaller gains, about \$125; Columbia and Harvard show larger, about \$350. The low-salaried institutions have thus increased their professors' salaries by a percentage far greater than that of the high-salaried institutions. The general change is shown in Table VII, which gives the relative frequencies of each salary amount in steps of \$500 in 1907-08 and 1912-13 for all of the institutions combined. The decrease in the lower salaries is clearly shown, the professorial staff having been moved up by about \$200 all along the salary scale.

TABLE VII

THE CHANGE IN SALARIES OF FULL PROFESSORS FROM 1907-08 TO 1912-13
ALL INSTITUTIONS COMBINED; COARSE GROUPING

<i>Salary</i>	<i>Percentile frequencies</i>		<i>Differences</i>
	1907-08	1912-13	
\$750-1,249	2.9	.8	- 2.1
1,250-1,749	12.3	9.4	- 2.9
1,750-2,249	16.2	14.5	- 1.7
2,250-2,749	15.3	17.1	+ 1.8
2,750-3,249	19.9	17.6	- 2.3
3,250-3,749	9.9	12.6	+ 2.7
3,750-4,249	12.6	12.3	- .3
4,250-4,749	2.8	4.3	+ 1.5
4,750-5,249	4.4	6.1	+ 1.7
5,250-5,749	2.1	2.6	+ .5
5,750-6,249	.5	1.6	+ 1.1
Over 6,250	1.0	1.2	+ .2

From the results of this new examination of the financial status of college teachers, it will be seen that the situation, as compared with that of five years ago, is encouraging. In spite of a variability of salaries in the same institutions and of a financial overlapping of academic grades, there is coming to be a kind of general agreement upon a salary for a college instructor that is rather better than that of the man who teaches in a high school. Junior professors in the smaller colleges receive salaries almost equal to those of instructors in the larger universities. Of 1500 representative full professors one-fourth receive \$2250 or less, one-fourth \$3750 or more, and one-tenth \$5000 or more, the median salary of all being \$3000. All salaries have increased during the last five years,—those of instructors have risen by about \$80, those of junior professors show a gain of from \$120 to \$226, those of full professors show an increase of from \$125 in the smaller institutions to \$350 in the largest. Teachers who by general agreement are considered distinguished receive from \$800 to \$2400 more than their colleagues of the same age.

COLLEGE CATALOGUES

WHAT is the function of the college catalogue? Is it an advertisement, or is its purpose to give needed information concerning the college? For whom is this information intended?

Perhaps nowhere else are the catalogues of all colleges of the United States under such constant examination as in the offices of the Carnegie Foundation. Each year those who conduct its work examine in greater or less detail the catalogues of at least one thousand institutions bearing the name college or university. It is out of

some such experience as this that the officers of the Foundation are led to feel that the questions which have just been asked are real and pertinent.

It will be generally admitted that whatever the practice may have come to be, the primary function of the college catalogue is not that of an advertisement: that its real function is the service that it renders in giving accurate information about the college, and that this information is intended primarily for the general public, and in particular for parents who have sons and daughters to send to college, and for those who have in mind to become themselves students in the college. It is very true that the catalogues will also be used by other colleges, by educational agencies, and by those who wish to make comparative studies of different colleges. The primary function of the catalogue, however, is to inform the general public in those matters in which it desires information concerning the college, and above all to give to the prospective student fair and sufficient information from which to estimate the kind of opportunity that the college can offer him.

If this, however, is accepted, it furnishes the point of view from which information in the catalogue should be prepared, namely, that of the prospective student who desires to know, as accurately as may be, the opportunity the college can offer.

It will also, I think, be generally admitted that the college as an educational agent may fairly be judged by the character of the catalogue that it issues, taking into account its literary form, its honesty, its accuracy, and the clearness and completeness with which its information is presented. Furthermore, the college can never separate its obligation as a moral agent from its obligation as an educational agency, and from a college above all other agencies the public has a right to expect that the official statements which it makes of its own work shall not only be set forth in good literary form, but that they shall be honestly and sincerely stated. An honest college ought to be represented by an honest catalogue. Even modesty ought not to be wholly out of reach.

It is not too much to say that if the one thousand and more colleges of the country were judged upon the basis of the literary excellence, the clearness, and the honesty of their catalogues, the showing would be an extremely embarrassing one. This results from a number of causes. In some fairly good institutions it arises out of the fact that the advertising side of the catalogue has been allowed to overshadow its primary purpose; in others the catalogue has not received the care and attention that it deserves; in still others the catalogue is prepared by a number of persons, and repetitions and lack of clearness are the inevitable result; while in a large group of institutions the catalogue has been used to set forth an exaggerated claim for advantages and facilities that the college does not possess. The time has come when those colleges which value their own scholarly standing and believe that they are offering only sincere and fruitful courses of study should give this matter earnest attention.

What is the information that the class of readers most interested in the catalogue desire to secure? What are the significant items of information that enable a parent or

a student to estimate the opportunity to be had at a given college and to compare that with the opportunity to be had at other institutions?

It will be generally agreed that in order to do its full duty by a student, a college should have a favorable location, able and devoted teachers, comprehensive yet genuine courses of study, the requisite libraries and laboratories, adequate provisions for food, shelter, health, and recreation for the student body, fair and honest requirements for admission and for promotion and graduation, classes of fair size, a homogeneous body of students, a competent board of government, a reasonable endowment and an income bearing some proportion to the work undertaken, and a body of graduates whose general standing and achievement commend the work of the college and make up an honorable college history.

It is only fair to expect the college catalogue to present as many of these characteristics of the college as possible in a way that shall be intelligible and illuminating to prospective students and their advisers. The reason why so many colleges that honestly intend to do this succeed but indifferently is, I believe, indicated, in part at least, in the following discussion. Some of the subjects that have been mentioned are not ordinarily included in college catalogues, and much information concerning administration, salaries, and departmental expenditures is perhaps not susceptible of adequate presentation in that way. On the other hand, essential facts relating to the endowment, equipment, income, and expenditure, the actual administration of standards for entrance and promotion, and the actual number and size of the courses and classes, can be so presented, and are far more important and illuminating than much of the material that the catalogues ordinarily include. If, for example, the flamboyant college that announces with a flourish of trumpets in its catalogue many high-sounding, ambitious courses, accompanied that statement with a brief exhibit of its financial resources, the student and his adviser would be protected. The institution that attempts to cover the whole field of university work with an income of a few thousand dollars a year would find comparatively few victims if its income and its courses of study were stated side by side. The statement of Lebanon University (Ohio), "Our reputation for educational efficiency is world-wide," is considerably illuminated by its additional statement, on the same page, "This past year a new factor has entered our school life. We have an endowment fund well started."

With the question of inclusion and exclusion is intimately related that of presentation. What the reader desires from a catalogue is to be put in position to judge the characteristics of the institution that it represents. As the compass of any catalogue forbids the presentation of all the facts upon which such a comparison must rest, the compilers must choose either merely to present their own institution as attractively as possible, or to add indirect, or even direct, persuasion as to its comparative excellence. It is scarcely necessary to say that most of our distinguished institutions present their case modestly, altho some, like Princeton, find it necessary to refer to themselves as a "great institution." Many others, however, so urge upon the reader

THE CONTENTS OF TWENTY-TWO UNIVERSITY CATALOGUES FOR 1912-13

Institution	Number of pages devoted to															Total
	Calen- dar	His- tory and Gov- ern- ment	Officers and Fac- ulty	Equip- ment	Terms of Ad- mission	Tuition and Ex- penses	Schools, Curric- ula	De- scrip- tion of Courses	Schol- ar- ships, Prizes, etc.	Degrees and Honors	List of Stu- dents	Sum- mary of Off- icers and Stu- dents	Alumni Associ- ations	Con- tents and Index	Miscel- laneous	
UNIVERSITY OF CALIFORNIA.....	6	9	82	45	73	3	18	294	25	45	153	6	4	20	38	821
UNIVERSITY OF CHICAGO	2	18	96	15	25	7	30	229	16	11	209	6	3	24	17	708
COLUMBIA UNIVERSITY.....	4	6	45	7	24	6	36	145	26	29	144	5	4	27	128	686
CORNELL UNIVERSITY ¹	9	8	63	66	59	16	17	294	13	16	162	1	8	6	166	904
HARVARD UNIVERSITY.....	4	26	75	47	52	25	27	193	107	59	193	10		14	87	919
UNIVERSITY OF ILLINOIS.....	5	6	40	16	30	5	106	181	8	41	77	8	3	12	34	572
JOHNS HOPKINS UNIVERSITY.....	1	6	29	5	10	10	15	86	16		56	3		16	15	268
LELAND STANFORD JUNIOR UNIVERSITY....	1	6	31	3	14	4	6	132	11	8	76		3	2	11	308
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	3	3	22	34	22	2	15	258	1	8	49	1	20	24	54	516
MCGILL UNIVERSITY ¹	8	14	51	52	63	41	30	207	47	29	185	3		31	36	797
UNIVERSITY OF MICHIGAN	3	8	62	42	42	11	15	211	9	29	165	4	1	20	38	660
UNIVERSITY OF MINNESOTA.....	3	4	67	46	40	20	37	407	12	23	58	4		11	69	801
UNIVERSITY OF MISSOURI ¹	4	7	69	16	28	10	18	209	11	20	77	1	1	6	49	526
UNIVERSITY OF NEBRASKA.....	3	5	48	14	27	13	6	233	3	15	70	2		6	59	504
NEW YORK UNIVERSITY.....	2	13	68	16	24	6	9	167	19	26	146	1	12	5	84	598
NORTHWESTERN UNIVERSITY.....	10	12	65	17	20	20	20	163	20	17	60	6	10	7	55	502
OHIO STATE UNIVERSITY.....	3	12	79	28	69	5	48	113	3		92	3		5	1	461
UNIVERSITY OF PENNSYLVANIA.....	4	16	37	38	10	8	20	409	14	22	124	2	13	5	19	741
PRINCETON UNIVERSITY.....	3	21	25	38	30	38	23	164	24	20	51	3	6	4	50	500
UNIVERSITY OF TORONTO ¹	7	27	64	24	36	15	39	249	68	10	50		1	9	144	743
UNIVERSITY OF WISCONSIN.....	2	19	44	28	30	7	36	324	10	30	155	8		12	64	769
YALE UNIVERSITY ¹	2	17	86	44	39	19	28	316	35	51	158	6	8	9	59	877

¹ Catalogue for 1911-12.

their judgment as to their own incomparable excellence that they repel him by this self-revelation of lack of knowledge, judgment, and good taste.

The table on page 114 of the contents of the catalogues of a score of our prominent universities indicates that there is a fairly general agreement as to the material that such documents should present. What agreement there is as to the order of the interest or importance of these items is indicated by the order of the items in the table. It will be seen that there is little agreement concerning the appropriate space that each kind of information should occupy. There is no agreement whatever concerning the manner and style of presentation. One occasionally hears the complaint that our universities and colleges are becoming all alike. Certainly the form and style of their catalogues are alike only in their utter divergence. It may be fairly said in criticism of all that they are too large.

The information presented in the introductory pages of a catalogue is seldom satisfactory. It sometimes includes, as in the catalogues of Harvard, Yale, and Chicago, the charter or the statutes of the university, or both, altho these are matters for which the general reader cares but little and which the student will seek elsewhere from more authoritative sources. The inclusion of such material in a catalogue probably indicates a more or less indefinite conception as to the purpose that a catalogue is designed to serve, with the result that such volumes frequently mingle material that is of historical or legal interest to only a few persons with current announcements or records that are of immediate interest to a wide circle of students and their advisers, together with merely ephemeral matter of only local usefulness, like lists of office hours or telephone numbers. The primary reason for a catalogue's existence lies somewhere between these extremes. Charters and statutes and directories and office hours and lists of married professors can be more conveniently, and much less expensively, provided for their respective users than in the institution's general catalogue. The introductory material, moreover, is seldom well balanced. The University of Wisconsin, for example, presents a history of the institution which, like the traditional professor's lecture, dwells expansively upon the earlier days, deals scantily with recent years, and never reaches the present. Probably much of this sort of thing is traditional and accidental.

It is perhaps difficult for a catalogue to show the characteristics of the college board of trustees or regents, except as the board appears very large or very small or very local. A brief paragraph, however, concerning the basis of appointment and length of term would be useful, together with a single line giving the professional or business occupation of each member of the board. There is probably no simple method of indicating the character of the administration, altho unnecessary complexity displays itself, as in the seventy-six faculty committees of Oberlin College.

The list of officers and professors is one of the items for which we naturally turn to a catalogue, even tho a mere list can do but little to indicate ability and devotion. The method of presenting such faculty lists varies greatly. Of the institutions

represented in the table Columbia has quite the largest faculty, but most of the other institutions occupy more catalogue space in presenting theirs. Columbia prints its full faculty list at the beginning of the book once and for all, giving titles and degrees, with their sources, for professors, and titles and degrees alone for other officers. Names only are repeated in connection with the various schools and colleges of the university, and these are condensed into a single solid paragraph. This is an improvement in both dignity and compactness upon the usual practice of repeating the names and degrees and titles in full, either at the head of the sections devoted to the several schools, as at Harvard, or before the list of students at the end of the book, as at Michigan. While, further, a catalogue may appropriately give the sources of degrees, and perhaps indicate previous service, as these may suggest the academic breadth or narrowness of the faculty, there is an extreme of expansion in this matter which is certainly to be avoided. This is represented by the elaborate academic biographies given by the University of Chicago for all of its officers of instruction, sometimes extending to thirty lines for a single individual, and including statements of membership in boards, committees, European travel, and the like. Chicago also repeats the names, degrees, and titles of professors at the head of the descriptions of its various schools, colleges, departments, boards, and committees, so that a professor who is associated with a number of these may find his name, degrees, and titles displayed in literally a dozen places. The University of Illinois follows a similar practice of expansion in its curious practice of triplicating titles, thus: "professor of Laryngology, Rhinology, and Otology, and clinical Laryngology, Rhinology, and Otology, and Head of the Department of Laryngology, Rhinology, and Otology." One must after all leave something to the imagination, especially as there is no known way of briefly summarizing character or teaching ability, even by the method of Phillips University (Oklahoma), which frankly calls a professor "beautiful and charming," or "the possessor of a delicately poetic nature."

If expansiveness in such matters is essential, its place is in special circulars or announcements, not in a general catalogue. When such circulars are issued, they partake rather of the nature of announcements, leaving the catalogue itself a comprehensive and condensed record. The mere binding of such separate announcements together, however, either without a table of contents or index, as by Cornell, or with the addition of such helps, as by the University of California, scarcely takes the place of a unified catalogue.

At the same time the faculty lists that are given at present are often suggestive of an institution's academic ideals. The fact that the customary degree of Ph.D. is held by only three of the one hundred and ninety-five professors and instructors of Valparaiso University (Indiana), by but two of the twenty-three at Southwestern University (Texas), and by none of the twenty-six at the University of Redlands (California), would alone throw doubt upon the claim of these institutions to the name of university. Westminster College (Colorado) counts the same persons as both

teachers and students. A dean and a professor are registered as graduate students; the instructor in history is also a senior in the college, the instructor in mathematics a junior, the librarian a sophomore. The size of the faculty, as this is represented in the catalogues of lesser institutions, is also suggestive. Greer College (Illinois) has one professor for Latin, Greek, French, and German. Centenary College (Louisiana), with six professors, provides sixty courses which "cover the same ground as the best institutions of the country." Oskaloosa College (Iowa) conducts a college of liberal arts, a college of fine arts, a school of expression, a school of music, a college of commerce, a school of the Bible, an academy, a normal department, and a graduate department, giving work toward the master's and doctor's degrees, with a total staff of only eleven persons. All of this means, of course, that these institutions, perhaps unwittingly, but no less certainly, promise more than they can possibly perform. A different sort of discrepancy, but one equally due to a failure to inflate all parts of the catalogue equally, is displayed by Kansas City University (Kansas), when it announces in medicine a faculty of sixty-four teachers, all professors, for forty-four students.

Few institutions attempt to give any statement in their catalogues as to their endowment, income, and expenditures. This most important and most illuminating information may, however, be given in a very brief paragraph like the following from the catalogue of the University of Virginia: "The university owns equipment, buildings, and grounds of an estimated value of \$2,001,953; holds productive funds to amount of \$1,416,766.98, and receives an annual appropriation from State of Virginia of \$80,000. The annual expenditures for the session of 1911-12 were \$251,663." Occasionally other institutions give partial information: The Catholic University of America and New York University, lists of endowments; Columbia University, an unrelated list of special funds; the University of Pennsylvania, a grouping in its index of endowments, gifts, and memorials; but such fragmentary financial information is unsatisfactory.

A simple and adequate financial statement would be of the greatest value to both the institution and the reader. Even worthy institutions are constantly tempted to enter upon projects that are too large for their resources; nothing would so conduce to an institution's own sanity as a sound financial statement. The prospective student and his advisers are entitled, moreover, to know the resources that are behind an institution's promises; but at present these resources are but vaguely known to the public, and to be learned accurately only, if at all, from the semi-confidential reports of treasurers. A brief summary of such financial facts in the catalogues of sincere institutions would not only aid in giving them the recognition that they deserve, but would also go far to protect the public against the host of institutions whose ability to perform has but little relation to their promises. A general understanding that total resources of about a million dollars and an income of about twenty thousand dollars a year from endowment is the minimum to be expected from a modest college would enable the catalogue reader to free himself from the hopeless burden of attempting to

appraise the values behind the empty boasting of about one-half of the colleges in the land. Thirty-three institutions that call themselves universities, and more than one hundred that call themselves colleges, report to the United States Bureau of Education that they have no endowment and no income except from tuition and incidental gifts. Nearly twice as many institutions in the same status make no financial reports. The unendowed university or college is, of course, a contradiction in terms and a hindrance to higher education, which must necessarily give more than it gets. The development of educational standards and support in the southern and south central states is particularly hampered by a host of such institutions. The most conspicuous of unendowed institutions reveal their inevitably low educational standards to any careful reader of their catalogues. Thus, altho Temple University in Philadelphia advertises "the *universal* nature of its curriculum and patronage," it also shows that two-thirds of its three thousand students are not required to meet the ordinary conditions for college entrance. Similarly, the list of the departments of Valparaiso University (Indiana), beginning with "Preparatory, Teachers', Kindergarten, Primary, Penmanship," and ending, "Commercial, Phonography and Typewriting, Review," and the fact that only about one-sixth of its five thousand students meet the ordinary requirement for entrance to college, sufficiently disprove its claim to be "the largest University and training-school in the United States." These large mixed schools undoubtedly do good by providing some sort of instruction for those for whom ordinary academic advantages are not available, but they assuredly deceive the public by assuming the name of university. One of the especially unfortunate effects of their action is that they are so easily and eagerly imitated by the unwise. Thus, Crookston College (Minnesota), which is promoted by Valparaiso graduates who seem to be quite free from any conception of the nature of a real college, issues a catalogue that is chiefly imitative of Valparaiso's worst traits. Sound financial statements such as have been mentioned, especially if they include a classification of expenditures, under administration, instruction, and so on, will do more than anything else can do to encourage educational genuineness and to discourage educational self-deception and pretence.

Similarly, with regard to equipment, our institutions greatly need a custom of simple yet adequate statement such as scarcely yet exists. Descriptions of equipment are at present almost always too elaborate or too brief. They are seldom comprehensive or discriminating. What the reader wishes to know regarding the size, character, and estimated value of the grounds and buildings can be very simply stated, in some such way as follows: "Blank Hall was built in 1912 at a cost of \$100,000, thru the generosity of John Blank, of the Class of 1893. A collegiate Gothic structure of gray stone, its five floors, each 50 by 100 feet, provide twelve laboratories and six lecture rooms for botany and an equal number for zoölogy, together with appropriate office, library, conference, and store rooms. An equipment of \$50,000 and an endowment of \$200,000 for maintenance were also provided by Mr. Blank

in 1913." Maps of the region and the city and the campus of an institution are also helpful, the last perhaps like Yale's relief map, which gives the buildings in perspective.

Without the example of some such modest yet adequate statement on the part of our universities, the catalogues of weak institutions often indulge in the wildest extravagance: Centenary College (Tennessee) claims "the finest climate taken all the year round to be found in all the earth;" Beaumont College (Kentucky), grounds that are "said to be unsurpassed in America;" Winona College (Indiana), a location that is "the most beautiful in the United States;" Graceland College (Iowa), a single building "that is sufficiently commodious to answer the needs of a first-class institution." What the actual provisions for the students' shelter, food, health, and recreation are, it is often difficult, if not impossible, to ascertain. Few institutions are so frank as Ohio Northern University in saying: "The University has no dormitory, owns no boarding-house, nor feeds its impecunious students in the basements of its buildings." As for libraries, it does not occur to one institution in a hundred to give, as Harvard does, a simple table of the number of volumes classified according to their kind.

The catalogue statements of academic affairs, similarly, leave much to be desired. Even our best institutions are so expansive in their statements of admission requirements that almost any two or three of these together occupy more space than the much clearer statement of the similar requirements of more than three hundred institutions in Mr. Clarence Kingsley's recent study of college entrance requirements for the United States Bureau of Education. The ordinary statement of admissions is not merely voluminous with petty requirements, but it is usually scattered among the descriptions of the various schools and colleges of the institution. There is every reason for combination and condensation.

As to the fairness or leniency with which these requirements are administered, few catalogues attempt to tell anything, altho many an institution might say with the Iowa State Teachers' College, that it "has never refused to receive a single student who came to the school. . . . It has always admitted every one without regard to his previous educational advantages." The table on page 65 indicates that it is by no means enough merely to announce fair entrance requirements. That 807 universities and colleges throughout the country should have among their 330,832 students only 183,089, or 55 per cent, who are, by their own classification, of college rank is a highly unsatisfactory condition, especially when the honest belief of numerous colleges that they are administering their highest requirements fairly is sadly mistaken. The Carnegie Foundation is constantly obliged to write to institutions whose honorable intentions cause them to ask its judgment of their records of admissions, some such summary as follows: "More than one-half of your entering class did not offer for admission the equivalent of a good four-year high school course; more than one-fourth appear not to have offered any high school preparation at all; and one-fifth

were admitted without either examination or certificate. Less than one-half entered without conditions; nearly one-fourth were conditioned in all subjects; and more than one-fourth were admitted on individual approval." When colleges generally adopt the University of Alabama's new practice of including in its catalogue a statement of the number of students who had previously graduated from four-year secondary schools, the number entering by examination and by certificate, the units offered for entrance, and the number of conditioned and special students, the worthy institution, the patron, and the student alike will be helped, and those institutions that welcome students from the fourth grade in the elementary school, or give no statement of entrance requirements, or announce that there are no entrance examinations, or that students may enter at any time, will be distinctly in a class by themselves.

With regard to the description of the institution's schools, colleges, and curricula, there is not only wide divergence in organization and arrangement, but entire chaos of terminology. The two representative university associations have come to a substantial agreement as to the meaning of such terms as "school," "college," "department," "curriculum," and "course," but Michigan, Minnesota, and Yale still use "department" for "school;" Virginia still uses "school" for "department;" and Illinois, Kansas, and Wisconsin continue to use "course" for "curriculum." Few institutions succeed in giving a clear idea of their research work, and there is in general much elaboration of obvious details, and much tautology, as in Wisconsin's "*Undergraduate Course for the Training of Teachers*—The Undergraduate Course for the Training of Teachers is designed to meet the needs of those students who, during the period of undergraduate study, desire to prepare themselves for teaching." In general the descriptions are imaginative rather than precise, and such apparent frankness as that of Blinn Memorial College (Texas) in announcing "It will require four years to complete this curse" is probably due only to the printer. The carelessness of catalogue proofreading is proverbial.

Greater order, compactness, clarity, and care in all of these matters on the part of our leading universities, while of great advantage to them, would be full of counsel for other institutions, which, like Georgetown University (District of Columbia), give the Ph.D. as an honorary degree, or, like Kansas City University (Kansas), confer it for non-resident work. It would discourage institutions like Ashland College (Ohio) from announcing that in a total of eight lecture rooms it provides curricula leading to seven different degrees and five diplomas. It would deter Maryland College for Women from inviting high school graduates into "two and three year courses, leading to degrees." Perhaps it would bring shame even to institutions like Tri-State College (Indiana), which invites elementary school graduates to a two-year curriculum leading to degrees in engineering.

The description of courses of instruction is necessarily a voluminous matter, but here again most institutions consume unnecessary space. Yale takes nearly three times as much for this purpose as Harvard, and Pennsylvania three times as much

as Columbia. This is due partly to the fact that the courses are seldom arranged alphabetically by departments, as by Columbia and Illinois, but are generally separated in schools, colleges, and groups, so that either the same course is described several times, as by Harvard, or courses in the same subject are scattered in half a dozen places, as by Wisconsin. The schedule of hours at which courses are given is ordinarily baffling to student and professor alike, altho with care, all of the groups, courses, and hours provided for several thousand students may be simply scheduled on two small pages, as by Harvard.

The genuineness of any offering of courses and their relation to an institution's resources and needs are much affected by the general attempt to cover the whole field of higher education, often without an understanding of the nature of such an undertaking. This frequently results, even in our leading institutions, in announcing a quantity of instruction that simply cannot be provided by the staff that is available. Thus, Brown University announces one course for every three students. At the University of Chicago no regular professor in the department of Semitics announces less than sixteen courses, one offers twenty, one twenty-five, and one thirty. The catalogue of the University of Pittsburgh gives the names of a dean, a professor, and three instructors who offer one hundred and fifty-six courses in geology; three of the five offer also ninety-two courses in crystallography, mineralogy, and lithology, and sixty-three courses in petrography; two of these three offer also two hundred and forty-three courses in mining geology; one of these two also bears one-half the burden of one hundred and sixty-two courses in ceramics; of the remaining two of the five, one bears also one-half the burden of one hundred and five courses in paleontology, and one also offers sixty-three in paleobotany. Together these five men announce, probably in addition to other work in other parts of the university, a grand total of seven hundred and fifty courses; one of the five, an instructor, being alone responsible for two hundred and eighty-five. Even tho all of these courses were announced for a single term only, these men would each have to give from forty to seventy courses at one time, which is preposterous. It is desirable that an institution announce all of its resources, but it is evident that current announcements need the check of the date when the course will be given, the number of students required before it will be given, and a compact summary for each year of the number of courses announced and the number actually given.

Statements concerning the separate courses themselves are also too frequently obscure or confused, and too frequently expanded by repetition and the addition of unnecessary items into a dozen lines that give no more real information than a mere title. An approximation to the extreme of brevity is desirable even tho it would deprive the reader of such illuminating information as that the biology taught at Nazarine University (California) has "no sympathy with . . . that evolutionary theory that makes man the offspring of the animal;" that at Union College (Nebraska) the History of Education is traced from its origin in the Garden of Eden; and that at Walla

Walla College (Washington) science is esteemed because "science was to Daniel the handmaid of his religion." The numbering of courses, moreover, is nearly always puzzling, and no institution tells in its catalogue the size of its classes, a most significant feature.

Fellowships, scholarships, prizes, and the like are described with immense elaboration, when they might very easily be condensed into tables, as by Harvard. Statements concerning fees and costs to students are usually scattered in various parts of the catalogue rather than condensed in one place, and sundry items of cost are often obscured or hidden, as when Ohio University announces that "There is no charge for tuition in any of the regular preparatory or collegiate classes, but all students pay a registration fee of nine dollars a semester." Undignified financial inducements are sometimes offered, as by Graceland College (Iowa), which refunds the railroad fare of students who pay a year's tuition in advance. Cheapness is sometimes made a criterion of excellence, as by Cotner University (Nebraska), which gives a table of tuition, living expenses, and incidentals of twenty-two institutions, showing the total cost to the student to be lowest at Cotner, as indeed it might well be, considering the quality of its work in the college and in the wretched medical school that it shelters.

Most institutions, except the University of Chicago, print in their catalogues lists of those who have received degrees during the previous year, but few print classifications and summaries of the number of the various kinds of degrees granted. It is illuminating, for example, to know that Taylor University (Indiana) granted a total of five A.B.'s and four D.D.'s in 1911; that the 1912 graduates of Winona College (Indiana) comprised one business, one primary, three liberal arts, six music, and nine preparatory students; that Arkansas Cumberland College gives the degree "Instructor of Literature" for half of an A.B. course, or that Lawrence College (Wisconsin) confers a "General Culture Diploma" which represents a "command of all the powers."

An institution's list of students is valuable and illuminating, and most institutions print such lists, altho there are exceptions. Frequently, however, the names are printed all together, making it difficult to learn how many belong in any category. Some such guide is essential among the aggregations of academy, art, Bible, business, commerce, domestic science, expression, fine arts, irregular, music, normal, oratory, painting, preparatory, and special students, for whom there appear to be no fixed requirement for entrance, and who yet constitute the majority of the students in most institutions. The situation is much clearer when summaries show, for example, that there are at Taylor University (Indiana) 12 candidates for the A.B., 16 theological, 104 preparatory, and 145 fine arts students, or that at Baylor College (Texas) 313 of the 402 students are in the preparatory school. Some institutions endeavor to avoid the obvious inference to be drawn from such unfortunate mixtures. Centenary College (Louisiana), which admits students from the seventh grade in the elementary school, considers it fortunate that its preparatory students "mingle with the upper class men and are in the same societies, athletic contests, religious exercises, and dormi-

tories." The retarding influence of such an arrangement upon whatever collegiate students there may be is not stated. Southwestern University (Texas) announces that it has a preparatory school because "every first-class college in the South has been directing special efforts toward fostering thorough preparatory schools." First-class colleges, on the contrary, abandon their competition with the public high schools in order to help them. Some institutions, however, like Delaware College, find, apparently with surprise, that "two-thirds of the failures in the Freshman class are from those who have not completed a high school course." Others, like Moore's Hill College (Indiana), frankly promise college credit for sub-freshman work taken after entrance. The real reason for all of this is indicated by the phraseology of a post-card which asks for the return to Bridgewater College (Virginia) of the names "of all persons who may be induced to attend." The financial reports of many institutions might, like Pennsylvania College, include the cost of "canvassing for students." It is still true that the majority of institutions in the United States bearing the name university or college take every student that they can get, quite regardless of their academic qualifications.

It would be well, further, if all scholarly institutions, in order to show the representative character of their student bodies, printed a summary of the numbers of their students from different states, and, if those of any one state predominate largely, the numbers from the counties of that state. It is probably too much to hope that even our best universities will ever publish the actual accomplishment of their students, as the United States military and naval academies do. Finally, it would be illuminating if the number, classification, geographical distribution, and vocations of the alumni were given.

When one turns from the consideration of the two hundred or two hundred and fifty college catalogues which show any consideration for good English, logical arrangement, and accuracy of statement, he finds all possible combinations of materials,—commercial, religious, social. For example: the catalogue of Pacific Union College (California) devotes its cover to the advertisement of biscuits; York College (Nebraska) announces that "Any one donating \$50,000 shall have the privilege of giving the institution a new and permanent name;" Westminster College (Pennsylvania) bars fraternities because "the noblest moralists of all ages and nations have condemned secret organizations," and bars card-playing because "it is intellectual gum-chewing;" Union College (Nebraska) presents a page headed "ESCORTING," beginning, "Upon the subject of escorting two thoughts need to be stated. The common practice of waiting at the doorway of a public building to accompany ladies home is rude;" Sullins College (Virginia) presents pictures of the heads of its students on the bodies of bugs; Palmer College (Missouri) pictures its "Furnace Room and Custodian;" Graceland College (Iowa) reports that "The attendance this year has been the best . . . if all the boosters would boost, a nice gain would be had each year;" a circular of Lombard College (Illinois) says of the new Lombard spirit: "There is

'TOBASCO SAUCE' in its eye." Truly, in the words of Bethany College (West Virginia), "The college is the mountain summit whence streams flow down upon all the fields of life."

Enough has been said to indicate that college catalogues are important enough to receive far more careful preparation. Almost all of them need a more definite aim, a more rigid exclusion, a more orderly arrangement, a greater condensation, a greater clarity of thought and simplicity of style. In general it would be fortunate if there were more information about trustees and administration, less repetition of faculty names, simple statements of financial resources, more illuminating description of equipment, condensed and clarified statements of entrance requirements, schools, curricula, courses, scholarships, and fees; some statement of the actual requirements enforced, courses given, and the size of classes; better classification and summaries of students, graduates, and alumni; better tables of contents and indices; and always better form and style.

Fortunately, the catalogues of our most distinguished institutions are best in most of these respects. But there is at present no catalogue that would not be vastly improved by more careful editorial scrutiny.

HENRY S. PRITCHETT.

October 15, 1913.

PART III
DE MORTUIS



DE MORTUIS

MARTIN REGISTER ANDREWS

MARTIN REGISTER ANDREWS was born on April 6, 1842, in Meigs, Ohio. He finished the course in the McConnelsville, Ohio, High School in 1859, and in 1861 enlisted in the Sixty-second regiment, Ohio Volunteer infantry, and later enlisted in the signal corps. In 1863 he helped to enroll the Forty-third battalion, Ohio infantry, in which he served as second lieutenant and adjutant. At the close of the war he matriculated at Marietta College, from which he was graduated in 1869.

From 1870 to 1879 he was superintendent of schools in Steubenville, Ohio, and in the latter year became principal of Marietta Academy. In 1895 he was appointed professor of history and political science in Marietta College, a chair he filled until his retirement. During 1894 Professor Andrews was associate editor of the *Ohio Educational Monthly*, and from 1899 to 1903 editor of the *Ohio Teacher*, and published much historical matter of a local nature. He was for a time secretary of the department of Higher Instruction of the National Educational Association.

Upon the nomination of the board of trustees of Marietta College, the Carnegie Foundation, on June 9, 1910, granted Professor Andrews a retiring allowance. He died in Marietta on April 20, 1913.

ALFRED BELLAMY AUBERT

ALFRED BELLAMY AUBERT was born in New York City on April 29, 1853, and was educated at the Columbia Grammar School, New York City, at the Lycée in Strassburg, Alsace-Lorraine, and at Cornell University, from which he was graduated with the degree of bachelor of science in 1873.

He was appointed professor of chemistry in the Maine State College of Agriculture and Mechanic Arts (now the University of Maine) in 1874, and held this position until his retirement in 1909. In 1899 the University of Maine gave to him the honorary degree of master of science; he was a joint editor of *Industrial Chemistry* (1912).

Professor Aubert's health having become impaired, the Carnegie Foundation, on September 30, 1909, granted to him a retiring allowance. He died in New York City on November 12, 1912.

MARVIN DAVIS BISBEE

MARVIN DAVIS BISBEE was born on June 21, 1845, in Chester, Vermont, and was graduated from Dartmouth College in 1871, and from the Chicago Theological Seminary in 1874; in the years 1871-73 he was a student at the Andover Theological Seminary. In 1874 he was ordained to the Congregationalist ministry, and filled pastorates at Penacook, New Hampshire, in 1874-77, and in Cambridge, Massachusetts, from 1877 to 1881. During the years 1881-86 he was associate editor of the *Congregationalist*, and in the latter year became librarian of Dartmouth College and professor of divinity. In 1893 he changed the chair of divinity for that of bibliography. After his retirement in 1910 he served in an advisory capacity at the Chicago Theological Seminary. He was a member of the American Historical Association and of the American Bibliographical Society, and received the honorary degree of master of arts from Dartmouth College in 1908.

Upon the nomination of the board of trustees of Dartmouth College, the Carnegie Foundation, on June 9, 1910, granted Professor Bisbee a retiring allowance. He died in Portland, Maine, on August 29, 1913.

WILLIAM HAND BROWNE

WILLIAM HAND BROWNE was born on December 31, 1828, in Baltimore, Maryland, and was educated as a physician, receiving the degree of doctor of medicine from the University of Maryland in 1850. In 1867 he became editor of the *Southern Review*, and from 1870 to 1875 he was editor of the *Southern Magazine*. Dr. Browne was appointed librarian of Johns Hopkins University in 1879, from which position he was transferred in 1891 to be associate professor of English literature. In 1893 he became professor. His publications include: *Maryland, the History of a Palatinate*; *George Calvert and Cecilius Calvert, Barons Baltimore*; and (in collaboration) *Life of Alexander H. Stephens*.

Upon the nomination of the board of trustees of the Johns Hopkins University, the Carnegie Foundation, on May 5, 1910, granted Professor Browne a retiring allowance. He died on December 13, 1912.

AUGUSTUS WOODRUFF COWLES

AUGUSTUS WOODRUFF COWLES was born on July 12, 1819, at Reading, New York, and was graduated from Union College in 1841. After teaching for two years in Schenectady he entered the Union Theological Seminary, and graduated in 1846, being ordained a minister in the Presbyterian Church in the following year. For the

ensuing ten years he was pastor of the Presbyterian Church in Brockport, New York. In 1856 he was elected the first president of Elmira College, a pioneer institution in the higher education of women. Dr. Cowles occupied the presidency of the college until 1889, and a professorship until 1906, a period of fifty years. He received the degree of doctor of laws from Hamilton College in 1887, and the degree of doctor of divinity from Union College in 1895.

The Carnegie Foundation, in recognition of his long and valuable service to education, granted Dr. Cowles a retiring allowance on December 10, 1906. He died in Elmira on March 15, 1913.

JOHN GREEN CURTIS

JOHN GREEN CURTIS was born on October 29, 1844, in New York City, and received from Harvard University the degree of bachelor of arts in 1866, and the degree of master of arts in 1869. He received the degree of doctor of medicine from the College of Physicians and Surgeons of Columbia University in 1870, having previously served in Bellevue Hospital as junior assistant and senior assistant. Upon his graduation he was appointed house surgeon in Bellevue Hospital, and in 1876 became attending surgeon, which position he held until 1880.

Upon his graduation he was also appointed assistant demonstrator in anatomy in the College of Physicians and Surgeons; in 1871 he became demonstrator of anatomy, in 1873 lecturer on the injuries and diseases of the blood vessels, in 1876 adjunct professor of physiology, and in 1883 professor of physiology, which position he held until his retirement in 1909, acting as secretary of the medical faculty for fourteen years and also having served as acting dean. He was a joint author of the *American Text-book of Physiology*, 1896, and a contributor to many medical societies and journals. In 1904 Columbia University gave him the degree of doctor of laws.

Upon the nomination of the board of trustees of Columbia University, the Carnegie Foundation, on January 21, 1909, conferred upon Professor Curtis a retiring allowance. He died on September 19, 1913.

WILLIAM WILLARD DANIELLS

WILLIAM WILLARD DANIELLS was born on March 10, 1840, in Oakland County, Michigan, was graduated from the Michigan Agricultural College in 1864, and received the degree of master of science from Harvard University in 1867; he also studied at the Universities of Halle and of Berlin.

He was assistant in chemistry at the Michigan Agricultural College in 1864-65,

and in 1868 he was appointed professor of chemistry at the University of Wisconsin, continuing as such until his retirement in 1907; from 1869 to 1874 his title was professor of analytical chemistry and agriculture, and from 1874 to 1880, professor of chemistry and agriculture. Professor Daniells was chemist to the Wisconsin State Geological Survey in 1872-76, and a member of the Wisconsin State Board of Health from 1885 to 1889, and was a member of the American Chemical Society. In 1897 he received the degree of doctor of science from the Michigan Agricultural College.

Upon the nomination of the board of regents of the University of Wisconsin, the Carnegie Foundation, on September 30, 1909, conferred on Professor Daniells a retiring allowance. He died on October 12, 1912.

DANIEL WEBSTER FISHER

DANIEL WEBSTER FISHER was born on January 17, 1838, in Sinking Valley, Pennsylvania, and was graduated from Washington and Jefferson College in 1857, and from the Western Theological Seminary in 1860. In the latter year he was ordained a minister in the Presbyterian Church, and held pastorates in New Orleans (1860-61), in Wheeling, West Virginia (1861-76), and at Hanover, Indiana (1877-79). In 1879 he became president of Hanover College, and continued in this office until his retirement.

Dr. Fisher was vice-president of the board of directors of the McCormick Theological Seminary, a member of the committee of the Presbyterian General Assembly that revised the Confession of Faith, and during the administration of President Harrison acted as an inspector of the United States Mint. He received the degree of doctor of divinity from Muskingum College in 1875, and the degree of doctor of laws from the University of Wooster (1887), and from Washington and Jefferson College.

The Carnegie Foundation, because of Dr. Fisher's effective service to education, granted to him on July 9, 1907, a retiring allowance. He died in the city of Washington, where his son was then Secretary of the Interior, on January 28, 1913.

REGINALD HEBER FITZ

REGINALD HEBER FITZ was born on May 5, 1843, in Chelsea, Massachusetts, and was educated at Harvard University, from which hereceived the degree of bachelor of arts in 1864, the degree of master of arts in 1867, and the degree of doctor of medicine in 1868. He received an appointment in the Harvard Medical School in 1870 as instructor of pathological anatomy, and remained in the faculty of the school

until his retirement in 1908, being assistant professor of pathological anatomy from 1873 to 1878, professor in 1878 and 1879, Shattuck Professor of the same subject, 1879-92, and Hersey Professor of the theory and practice of physic in 1892-1908. Dr. Fitz served the Massachusetts General Hospital as pathologist from 1871 to 1887, and as visiting physician from 1887 to 1908. He was active in the deliberations of numerous medical societies and contributed to them many valuable papers. In 1886 he published a memorable paper on the perforating ulcer of the vermiform appendix, to which he gave the name appendicitis, and outlined what has become the modern diagnosis and treatment; the medical profession desired to name the newly differentiated disease "Fitz Disease," but he declined. He received the degree of doctor of laws in 1905 from Harvard University.

Upon the recommendation of the president and fellows of Harvard University, the Carnegie Foundation, on July 2, 1908, granted Dr. Fitz a retiring allowance. He died in Boston on September 30, 1913.

WILLIAM MORRIS FONTAINE

WILLIAM MORRIS FONTAINE was born on December 1, 1835, in Louisa County, Virginia. He was graduated from the University of Virginia in 1859, and after teaching for a time in Hanover Academy, he entered the Confederate Army in 1861 as second lieutenant of artillery. In 1863 he was made first lieutenant of ordnance, and served as such until April 9, 1865.

During the years 1869 and 1870 he studied at the Royal School of Mines in Freiberg, Saxony, and in 1873 was appointed professor of chemistry and geology in West Virginia University. In 1878 he resigned this office, having been appointed professor of geology and natural history at the University of Virginia, a chair he occupied until his retirement. Professor Fontaine was the author (with M. F. Maury) of *Resources of West Virginia* (1876); (with I. C. White) of the Report of Second Pennsylvania Geological Survey (1880); Monograph VI (1883) and Monograph XV (1889) of the United States Geological Survey, and of the Bulletin on the Potomac Foundation. He was a fellow of the Geological Society of America.

In appreciation of Professor Fontaine's long and distinguished service, the Carnegie Foundation, on June 9, 1910, granted him a retiring allowance. He died in Charlottesville on April 29, 1913.

THOMAS MILTON GATCH

THOMAS MILTON GATCH was born on January 29, 1833, in Milford, Ohio, and was graduated from the Ohio Wesleyan University in 1855. He was professor of natural science, University of the Pacific, in 1856; principal of the Santa Cruz, California, public schools in 1857; and professor of mathematics, University of the Pacific, in 1858. From 1860 to 1865 he was president of Willamette University, and in 1866 was again principal of the Santa Cruz schools. From 1867 to 1870 he was principal of the Portland Academy, Portland, Oregon, and for the succeeding ten years he served a second time as president of Willamette University. During 1880 he was professor of history and English literature at the University of Oregon, and from 1881 to 1887 principal of the Wasco Academy. In 1887 he went to the University of Washington as president, and served as such until 1895; in 1895-97 he filled the chair of political science in that institution. From 1897 until his retirement he was president of the Oregon Agricultural College. He received the degree of doctor of philosophy from De Pauw University (then the Indiana Asbury University) in 1874.

The Carnegie Foundation, in view of Dr. Gatch's long service to education in the northwest, granted him a retiring allowance on December 10, 1906. He died in Seattle, Washington, on April 22, 1913.

AMELIA GAYLE GORGAS

AMELIA GAYLE GORGAS was born on June 1, 1826, in Greensboro, Alabama, the daughter of Governor Gayle of Alabama. She was educated at female seminaries in Tuscaloosa, Alabama, and Columbia, Tennessee, and married General Josiah Gorgas, afterward vice-chancellor of the University of the South, and president of the University of Alabama; her son is in charge of the sanitation of the Panama Canal Zone. In 1880 she was appointed librarian of the University of Alabama, and fulfilled the duties of that office until her retirement in 1907.

The Carnegie Foundation, on December 10, 1906, as a mark of respect for her long service to education in Alabama, granted Mrs. Gorgas a retiring allowance. She died in Tuscaloosa, Alabama, on January 3, 1913.

SAMUEL ALLAN LATTIMORE

SAMUEL ALLAN LATTIMORE was born on May 31, 1828, in Liberty, Indiana, and was graduated from De Pauw University (then the Indiana Asbury University) in 1850. Upon graduation he became tutor in classics in that institution, and in 1852 professor of Greek. Having studied chemistry at Harvard University in 1860, he was

appointed professor of chemistry at Genesee College, now Syracuse University. In 1867 he became professor of chemistry at the University of Rochester, and continued as such until his retirement, serving from 1896 to 1898 as acting president of the institution.

Professor Lattimore served in 1879 and in 1900 as a commissioner of assay at the United States Mint; from 1881 to 1883 he was chemist to the New York State Board of Health; for many years succeeding 1886 he was chemist to the New York State department of agriculture; he served as a member of the Rochester board of health, and planned the water supply system of that city; he was president of the board of directors of the Reynolds Library, Rochester. He was a member of the American Chemical Society and a fellow of the American Association for the Advancement of Science. In 1873 De Pauw University and the Iowa Wesleyan University gave him the honorary degree of doctor of philosophy, and Hamilton College the degree of doctor of laws.

Upon the nomination of the board of trustees of the University of Rochester, the Carnegie Foundation, on March 26, 1908, granted Professor Lattimore a retiring allowance. He died in Rochester on February 17, 1913.

GEORGE BOYD McCUTCHEN

GEOERGE BOYD McCUTCHEN was born on September 7, 1868, at Valley Grove, West Virginia, and was educated at Washington and Jefferson College, from which he was graduated *cum laude* in 1888. He taught Latin in the preparatory department of the college from 1887 to 1891, in which year he was appointed adjunct professor of mathematics in the college faculty. In 1899 he became professor of mathematics.

Professor McCutchen having been compelled to seek a high altitude on account of impaired health, the Carnegie Foundation, on July 26, 1906, granted him a disability allowance. He died on January 24, 1913.

JOHN WILLIAM MALLET

JOHN WILLIAM MALLET was born on October 10, 1832, in Dublin, Ireland, and was educated at Trinity College, Dublin, from which he received the degree of bachelor of arts in 1853; he had received the degree of doctor of philosophy from the University of Göttingen in 1852. He came to the United States immediately after graduation, and in 1854 was assistant professor of analytical chemistry in Amherst College. In 1855-56 he was chemist to the geological survey of Alabama, and from 1855 to 1860 professor of chemistry at the University of Alabama.

In 1861 Professor Mallet was appointed an aide-de-camp on the staff of Brigadier-

General Rhodes of the Confederate Army, and in 1862 he was transferred to the ordnance bureau of the war department as superintendent of Confederate States Ordnance Laboratories, with the rank of captain of artillery. He suggested and organized the centralized ordnance laboratory and arsenal of the Confederacy at Macon, Georgia, and was in command of the battalion formed of the employees; in 1863 he was promoted to be a major, and in February, 1864, to be a lieutenant-colonel. He performed and superintended much experimentation with materials resorted to as substitutes for the unobtainable usual ingredients.

At the close of hostilities Professor Mallet was elected professor of chemistry in the University of Louisiana (now Tulane University), and in 1867 he accepted a similar professorship at the University of Virginia, and continued to occupy this position until 1908, except for the year 1883-84, when he was professor at the University of Texas, and the year 1884-85, when he occupied a professorial chair at the Jefferson Medical College, Philadelphia. Professor Mallet was one of the judges in the department of chemical manufacture at the Centennial Exposition, three times a member of the United States Assay Commission, a fellow of the Royal Society and of the Chemical Society of London, an associate fellow of the American Academy of Arts and Sciences, a member of the American Philosophical Society and of the New York Academy of Sciences, and president in 1882 of the American Chemical Society. He received the degree of doctor of medicine from the University of Louisiana in 1868, and the degree of doctor of laws from William and Mary College and from the University of Mississippi in 1872, from Princeton University in 1896, from the Johns Hopkins University in 1902, and from the University of Pennsylvania in 1906.

The Carnegie Foundation, in recognition of Professor Mallet's high and scholarly attainments, granted to him on October 8, 1907, a retiring allowance. He died at Charlottesville on November 6, 1912.

SUSAN LINCOLN MILLS

SUSAN LINCOLN TOLMAN MILLS was born on November 18, 1825, at Enosburgh, Vermont, and was graduated from Mount Holyoke College (then Mount Holyoke Seminary) in 1845. The following three years she was instructor in science at Mount Holyoke, and in 1848 she accompanied her husband as a missionary to India, and for seven years was instructor in English and science in Batticotta College, Ceylon. From 1859 to 1864 she was instructor in science at Oahu College, Honolulu, and then, returning to the United States, after a year as instructor in the Oakland Seminary, she became instructor in science in the Benicia Seminary, which her husband had purchased. In 1871 this institution was transformed into Mills Seminary, which received a college charter in 1884, and which began in 1906 to eliminate work not collegiate. In 1885 Mrs. Mills, who had taught previously in the institution, succeeded

her husband as president, and remained such until she was made president emeritus in 1909.

Dr. and Mrs. Mills in 1877 transferred the institution and its property to a board of trustees, and in 1901 Mrs. Mills gave to the trustees real property to the value of \$200,000 for the benefit of the institution. She received from Mount Holyoke College the degree of doctor of literature.

The Carnegie Foundation, in appreciation of Mrs. Mills's long and admirable service, granted her a retiring allowance on September 30, 1909. She died at Mills College on December 12, 1912.

EDGAR GARDNER MURPHY

EDGAR GARDNER MURPHY was born on August 31, 1869, in Fort Smith, Arkansas, and was educated in schools at San Antonio, Texas, and at the University of the South, from which he was graduated in 1889. He studied at the General Theological Seminary, and was ordained a priest in the Protestant Episcopal Church by the Rt. Rev. James S. Johnston, Bishop of West Texas. After service in Texas and in the north he became rector of St. John's Church, Montgomery, Alabama.

Mr. Murphy became actively engaged in constructive educational and social work, first in Montgomery, and then throughout the entire south. He suggested and organized a national conference at Montgomery in 1900 for the consideration of race problems and conditions of the south, from which resulted a Southern Society with these aims, of which he was secretary. He was the chairman of the Alabama Child Labor Committee, and organizer and first secretary of the National Child Labor Committee. His address at the 1903 National Conference of Charities and Corrections in Atlanta is considered a memorable event in the struggle to remedy the conditions of working children. In 1901 he was appointed executive secretary of the Southern Education Board, and was also vice-president of the Conference for Education in the South. Mr. Murphy edited the official reports of the Conferences on Race Problems of the South, and the reports of the sixth, seventh, and eighth sessions of the Conferences for Education in the South. He also published *Words for the Church* (1896); *The Larger Life* (1896); *Problems of the Present South* (1908); *The Basis of Ascendancy* (1909); *A Beginner's Star Book* (1912). He received the degree of master of arts in 1904 from Yale University, and the degree of doctor of civil law in 1911 from the University of the South.

His health having become impaired, the Carnegie Foundation, on October 29, 1908, "in view of the distinguished national service to education" rendered by Mr. Murphy, granted him a retiring allowance. He died in New York City on June 23, 1913.

ISAAC AUGUSTUS PARKER

ISAAC AUGUSTUS PARKER was born on December 31, 1825, in South Woodstock, Vermont, and was graduated from Dartmouth College with the class of 1853. He began teaching before he went to college, and upon graduation became principal of the Orleans Liberal Institute at Glover, Vermont. In 1858 he resigned this position to become Williamson Professor of Greek in Lombard College, a chair he occupied for fifty years until his retirement in 1908. In 1902 Buchtel College conferred upon him the honorary degree of doctor of philosophy.

The Carnegie Foundation, in recognition of Professor Parker's long and valuable service as a teacher, granted a retiring allowance to him on October 8, 1907. He died in Galesburg, Illinois, on October 7, 1912.

EBEN BURT PARSONS

EBBEN BURT PARSONS was born on March 3, 1835, in Pittsfield, Massachusetts, and was graduated from Williams College with the class of 1859. Immediately thereafter he became principal of the high school at Greenfield, Massachusetts, and three years later professor of mathematics in Cooper Institute, New York City. After three years of study in the Union and Auburn theological seminaries, he was ordained a minister of the Presbyterian Church, and from 1866 to 1888 he was pastor of the Presbyterian Church in Baldwinsville, New York. In the latter year he became registrar of Williams College, and continued as such until his retirement. He edited numerous publications in regard to the Williams College alumni; in 1881 he received the degree of doctor of divinity from Maryville College.

On April 8, 1909, upon the nomination of the board of trustees of Williams College, the Carnegie Foundation granted a retiring allowance to Dr. Parsons. He died in Williamstown on January 23, 1913.

WILLIAM PILOT

WILLIAM PILOT was born on December 30, 1841, in Bristol, England, and received his education at St. Boniface College, Warminster, and at St. Augustine's College, Canterbury. In 1867 he was ordained by the Rt. Rev. Samuel Wilberforce, Bishop of Oxford, and immediately sailed for Newfoundland, having been appointed vice-principal of Queen's College. For forty-one years thereafter he rendered conspicuous service to education in Newfoundland, as principal of Queen's College, as superintendent of the Church of England schools, and for sixteen years as president of the Council of Higher Education of Newfoundland.

He received the degree of doctor of civil law from King's College, Nova Scotia, the degree of doctor of divinity under letters patent from Queen Victoria, and was made a Companion of the Imperial Service Order by King Edward VII. He was a canon of the cathedral of St. John's.

The Carnegie Foundation, in recognition of Canon Pilot's labor for higher education in Newfoundland, granted him a retiring allowance on February 8, 1908. He died in St. John's on September 29, 1913.

CHARLES GREENE ROCKWOOD

CHARLES GREENE ROCKWOOD was born on January 11, 1843, in New York City, and was educated at Yale University, from which he received the degree of bachelor of arts in 1864 and the degree of doctor of philosophy in 1866. From 1868 to 1873 he was professor of mathematics and natural philosophy in Bowdoin College; from 1873 to 1877, professor of mathematics and astronomy in Rutgers College; and from 1877 to 1905, professor of mathematics in Princeton University. He was a member of the eighth International Geographic Congress in 1904, a fellow of the American Association for the Advancement of Science, and secretary of the American Meteorological Society; he received the honorary degree of master of science in 1869 from Bowdoin College, and in 1896 from Princeton University.

Upon the nomination of the board of trustees of Princeton University the Carnegie Foundation, on September 30, 1909, granted Professor Rockwood a retiring allowance. He died in Caldwell, New Jersey, on July 2, 1913.

SARAH SKINNER

SARAH SKINNER was born on July 2, 1838, in Boston, Massachusetts, and was educated at the Cambridge (Massachusetts) High School, continuing her classical studies there after graduation. She taught for several years in the public schools of Massachusetts, in schools conducted by the Freedman's Bureau in Galveston and San Antonio, Texas, and in private schools in the city of Washington. In 1875 she was elected professor of Latin at the Western Female Seminary, Oxford, Ohio (now the Western College for Women), where she continued to teach until 1907.

On July 26, 1906, in appreciation of Professor Skinner's long service in the higher education of women, the Carnegie Foundation granted her a retiring allowance. She died in the city of Washington on November 17, 1912.

FRANK SOULÉ

FRANK SOULÉ was born on August 6, 1845, in Woodville, Mississippi, and was appointed a cadet at the United States Military Academy at West Point, from which he was graduated in 1866. From 1867 to 1869 he was assistant instructor in ordnance and gunnery at West Point, in 1868 and 1869 being also acting assistant professor of mathematics. In 1869 he went to the University of California as assistant professor of mathematics and military instructor; in 1872 he became professor of civil engineering and astronomy, and in 1900 his title was changed to professor of civil engineering. From 1898 to 1900 he was also acting professor of military science and tactics. Professor Soulé was a member of several commissions in California to investigate engineering problems, and acted as consulting engineer for various business corporations; he published numerous technical papers.

The Carnegie Foundation, in recognition of Professor Soulé's long service to education in California, granted him a retiring allowance on September 30, 1909. He died on February 14, 1913.

LUCIEN AUGUSTUS WAIT

LUCIEN AUGUSTUS WAIT was born on February 8, 1846, in Highgate, Vermont, and was graduated from Harvard University with the degree of bachelor of arts in 1870. Immediately upon graduation he was appointed assistant professor of mathematics at Cornell University, in 1877 he became associate professor, in 1891 professor, and in 1895 head of the department of mathematics. He founded the Cascadilla School and was for many years president of its board of trustees. He was a member of the American Mathematical Society and of the National Geographical Society, and in the years 1873-74 he served as consul of the United States at Athens, Greece.

Professor Wait's health having failed, the Carnegie Foundation, upon the nomination of the board of trustees of Cornell University, granted him, on May 5, 1910, a retiring allowance. He died at Clifton Springs, New York, on September 6, 1913.

REPORT OF THE TREASURER



REPORT OF THE TREASURER

To the Chairman and Trustees of the Carnegie Foundation for the Advancement of Teaching:

IN accordance with the provisions of Article IX of the By-laws, the chairman of the board of trustees designated Messrs. Patterson, Teele, and Dennis, certified public accountants, to audit the accounts of the Foundation for the last fiscal year. The books of the treasurer were accordingly turned over to this firm, whose report follows.

October 8, 1913.

WE have audited the accounts of the Carnegie Foundation for the Advancement of Teaching, including the accounts for the General Endowment and the Division of Educational Enquiry, for the year ending September 30, 1913. Income from investments has been duly accounted for and expenditures have been duly authorized and vouched. The securities representing the investments were produced to us, and the cash in bank and on hand has been duly verified.

The accompanying Income and Expenditure Account and Balance Sheet are in accordance with the books of the Foundation, and we hereby certify that they exhibit a true and correct statement of the finances at September 30, 1913.

(Signed) PATTERSON, TEELE & DENNIS,

Accountants and Auditors.

INCOME AND EXPENDITURE
FOR THE YEAR ENDING SEPTEMBER 30, 1913
GENERAL ENDOWMENT

Income

From Securities in the Endowment Fund	\$650,246.38	
From other Investments	38,922.79	
<i>Total Income from Investments. Exhibit 1</i>		\$689,169.17
Accumulation of Bond Discount—Net		2,616.66
Interest on Bank Balances		2,409.98
		\$694,195.81

Expenditure

RETIRING ALLOWANCES:

To Professors, Officers, and Widows in Institutions on the Associated List	\$478,987.14	
To Professors, Officers, and Widows not in Institutions on the Associated List	121,402.87	\$600,390.01

ADMINISTRATION:

Salaries	\$24,527.43	
Traveling Expenses of Trustees, Officers, and Assistants	2,732.41	
Rents	4,724.96	
Postage	385.64	
Stationery and Office Supplies	609.20	
Professional Fees	1,887.97	
Telephone and Telegraph (proportion)	152.27	
Depreciation of Furniture and Fittings, 10%	618.83	
Miscellaneous	993.51	\$36,632.22

PUBLICATION:

Printing Seventh Annual Report (proportion of cost)	\$2,223.89	
Labor, Postage, etc., Mailing (proportion of cost)	368.02	\$2,591.91
Printing Minutes	153.94	
Salary of Assistant to February 28, 1913	833.30	\$3,579.15
<i>Total Expenditure for the year ending September 30, 1913</i>		\$640,601.88
Accumulation of Surplus Income for the year ending September 30, 1913		53,594.43
		\$694,195.81

INCOME AND EXPENDITURE
FOR THE YEAR ENDING SEPTEMBER 30, 1913
DIVISION OF EDUCATIONAL ENQUIRY

Income

From Securities in the Endowment Fund. <i>Exhibit 2</i>	\$44,166.66
Interest on Bank Balances	133.42
	\$44,300.08

Expenditure

COMMISSION TO INVESTIGATE THE EDUCATIONAL SYSTEM AND CONDITIONS OF VERMONT:

Salary	\$1,666.67	
Professional Fees	2,779.08	
Traveling Expenses	1,695.50	
Sundries	116.00	\$6,257.25

STUDY OF LEGAL EDUCATION:

Salary	\$1,900.00	
Traveling Expenses	913.99	
Professional Fees	46.80	
Printing	200.40	
Sundries	26.41	\$3,087.60

PUBLICATION:

Seventh Annual Report (proportion of cost)		
Printing	\$1,871.62	
Labor, Postage, etc., Mailing	730.29	\$2,601.91

Salaries	\$2,830.03	
Traveling Expenses	216.86	
Professional Fees	970.00	
Rent	1,100.00	
Stationery and Office Supplies	302.05	
Telephone and Telegraph (proportion)	122.69	
Depreciation of Furniture and Fittings, 10%	27.21	
Miscellaneous	314.79	\$5,883.63

\$17,830.39

Accumulation of Surplus Income for the
year ending September 30, 1913

26,469.69

\$44,300.08

BALANCE SHEET, SEPTEMBER 30, 1913

GENERAL ENDOWMENT

	<i>Assets</i>	
INVESTMENTS. <i>Exhibit 1</i>		\$14,012,940.91
INTEREST ACCRUED ON INVESTMENTS TO SEPTEMBER 30, 1913. <i>Exhibit 1</i>		217,442.24
CASH IN BANK AND IN HAND		61,620.50
OFFICE FURNITURE AND FITTINGS	\$6,188.34	
Less Reserve for Depreciation	3,761.11	2,427.23
		<u>\$14,294,430.88</u>
	<i>Funds and Accumulations</i>	
ENDOWMENT FUND. <i>Exhibit 3</i>	\$13,075,000.00	
INCOME AND EXPENDITURE ACCOUNT:		
Accumulation to September 30, 1912	\$1,165,836.45	
Accumulation for the year ending Sep- tember 30, 1913	<u>53,594.43</u>	
Total Accumulation to September 30, 1913	<u>\$1,219,430.88</u>	
		<u><u>\$14,294,430.88</u></u>

BALANCE SHEET, SEPTEMBER 30, 1913
THE DIVISION OF EDUCATIONAL ENQUIRY

Assets

INVESTMENTS. <i>Exhibit 2</i>		\$1,250,000.00
INTEREST ACCRUED ON INVESTMENTS TO SEPTEMBER 30, 1913. <i>Exhibit 2</i>		19,166.66
CASH IN BANK		7,058.19
OFFICE FURNITURE AND FITTINGS	\$272.05	
Less Reserve for Depreciation, 10%	27.21	244.84
		<u>\$1,276,469.69</u>

Funds and Accumulations

ENDOWMENT FUND	\$1,250,000.00
INCOME AND EXPENDITURE ACCOUNT:	
Accumulation for the year ending September 30, 1913	26,469.69
	<u><u>\$1,276,469.69</u></u>

STATEMENT OF SECURITIES AND INCOME THEREON
SEPTEMBER 30, 1913

GENERAL ENDOWMENT

Schedule A, Exhibit 1

Par Value	Securities	Date Acquired	Date Interest due	Book Value	INTEREST	
					Total Accrued Year ending Sept. 30, 1913	Accrued Sept. 30, 1913 for later collection
\$2,000,000.00	U.S. Steel Corporation, Series "A" Registered 50 year 5% Gold Bonds. Due April 1, 1951	May 3, 1911, \$1,000,000.00 Dec. 2, 1911, \$1,000,000.00	Jan. 1 & July 1	\$2,000,000.00	\$100,000.00	\$25,000.00
3,350,000.00	U.S. Steel Corporation, Series "B" Registered 50 year 5% Gold Bonds. Due April 1, 1951	Dec. 1, 1905	Feb. 1 & Aug. 1	3,350,000.00	167,500.00	27,916.67
2,850,000.00	U.S. Steel Corporation, Series "D" Registered 50 year 5% Gold Bonds. Due April 1, 1951	Dec. 1, 1905	Apr. 1 & Oct. 1	2,850,000.00	153,611.11	71,250.00
1,000,000.00	U.S. Steel Corporation, Series "E" Registered 50 year 5% Gold Bonds. Due April 1, 1951	May 29, 1912	May 1 & Nov. 1	1,000,000.00	50,000.00	20,833.33
3,300,000.00	U.S. Steel Corporation, Series "F" Registered 50 year 5% Gold Bonds. Due April 1, 1951	Dec. 1, 1905	June 1 & Dec. 1	3,300,000.00	165,000.00	55,000.00
50,000.00	Baltimore & Ohio R. R. Co. Southwestern Division, First Mtge. 3½% Gold Coupon Bonds. Due July 1, 1925	June 9, 1906, \$20,000.00 Dec. 6, 1906, \$30,000.00	Jan. 1 & July 1	47,210.32	1,750.00	437.50
50,000.00	Pennsylvania Co. 4% 15-25 year Gold Coupon Loan 1906. Due April 1, 1931	June 9, 1906	Apr. 1 & Oct. 1	49,382.95	2,000.00	1,000.00
50,000.00	The Lake Shore & Michigan So. Ry. Co. 25 year 4% Gold Coupon Bonds. Due September 1, 1928	June 9, 1906	Mar. 1 & Sept. 1	49,408.40	2,000.00	166.67
50,000.00	Chicago, Burlington & Quincy R. R. Co. Illinois Division, First Mtge. 4% Bonds. Due July 1, 1949	April 1, 1906	Jan. 1 & July 1	50,468.69	2,000.00	500.00
50,000.00	Southern Pacific R. R. Co. First Refunding Mtge. 4% Gold Bonds. Due January 1, 1955	Aug. 1, 1906, \$20,000.00 Apr. 29, 1908, \$30,000.00	Jan. 1 & July 1	45,931.52	2,000.00	500.00
95,000.00	Oregon Short Line R. R. Co. 4% Refunding Gold Bonds. Due December 1, 1929	Oct. 3, 1906, \$60,000.00 Dec. 12, 1907, \$35,000.00	June 1 & Dec. 1	88,203.70	3,800.00	1,266.67
40,000.00	Oregon Railroad & Navigation Co. 4% Consolidated Mtge. Gold Bonds. Due June 1, 1946	Dec. 6, 1906, \$30,000.00 Apr. 30, 1908, \$5,000.00 Apr. 10, 1913, \$5,000.00	June 1 & Dec. 1	39,381.90	1,494.44	533.33

50,000.00	The City of New York Registered 3½% Corporate Stocks for replenishing the Fund for Street & Park Openings. Due May 1, 1954	April 3, 1907	May 1 & Nov. 1	45,474.14	1,750.00	729.17
100,000.00	Northern Pacific—Great Northern, Chicago, Burlington & Quincy R. R. Co. Collateral Trust 4% Joint Bonds. Due July 1, 1921	July 2, 1907, \$70,000.00 Oct. 4, 1909, \$30,000.00	Jan. 1 & July 1	96,602.16	4,000.00	1,000.00
20,000.00	Central R. R. Co. of New Jersey General Mtge. 5% Bonds. Due July 1, 1937	Aug. 7, 1907	Jan. 1 & July 1	24,153.60	1,000.00	250.00
100,000.00	Union Pacific R. R. Co. 20 year 4% Convertible Gold Bonds. Due July 1, 1927	Oct. 11, 1907, \$35,000.00 Feb. 7, 1908, \$38,000.00 June 11, 1908, \$7,000.00	Jan. 1 & July 1	89,864.32	4,000.00	1,000.00
55,000.00	Chicago, Indiana & Southern R. R. Co. Consolidated Mtge. 4½% 50 year Gold Bonds. Due January 1, 1956	July 10, 1908	Jan. 1 & July 1	50,472.49	2,200.00	550.00
50,000.00	Atchison, Topeka & Santa Fe Ry. Co. Transcontinental Short Line First Mtge. 4% 50 year Gold Bonds. Due July 1, 1958	Sept. 3, 1908, \$26,000.00 Apr. 10, 1913, \$4,000.00 Sept. 6, 1913, \$15,000.00 Sept. 29, 1913, \$5,000.00	Jan. 1 & July 1	46,283.13	958.34	300.56
50,000.00	Union Pacific R. R. Co. First Lien and Refunding Mtge. 4% Bonds. Due March 1, 2008	Nov. 9, 1908, \$36,000.00 Apr. 10, 1913, \$14,000.00	Mar. 1 & Sept. 1	47,812.99	1,704.45	166.67
50,000.00	Chesapeake & Ohio Ry. Co. General Funding and Improvement Mtge. 5% Bonds. Due January 1, 1929	March 12, 1909	Jan. 1 & July 1	50,672.22	2,500.00	625.00
25,000.00	Atchison, Topeka & Santa Fe Ry. Co. Gen. Mtge. 4% Bonds. Due October 1, 1995	May 17, 1909	Apr. 1 & Oct. 1	25,267.32	1,000.00	500.00
75,000.00	Chicago, Milwaukee & St. Paul Ry. Co. 25 year 4% Gold Bonds. Due July 1, 1934	Feb. 3, 1910	Jan. 1 & July 1	70,934.00	3,000.00	750.00
55,000.00	Baltimore & Ohio (Pittsburgh, Lake Erie & West Virginia System) R. R. Co. Refunding 4% Gold Bonds. Due November 1, 1941	April 20, 1910	May 1 & Nov. 1	50,534.41	2,200.00	916.67
200,000.00	Illinois Central R. R. Co. Louisville Division & Terminal, First Mortgage 3½% Gold Bonds. Due July 1, 1953	March 11, 1913	Jan. 1 & July 1	169,920.39	3,850.00	1,750.00
60,000.00	Duluth, Missabe & Northern Ry. Co. General Mtge. 5% 25 year Gold Bonds. Due January 1, 1941	March 11, 1913	Jan. 1 & July 1	63,716.48	1,650.00	750.00
300,000.00	H. C. Frick Coke Co. 5% Pittsburgh Monongahela 1st Lien Purchase Money Gold Bonds. Due January 1, 1925, to January 1, 1944	March 13, 1913	Jan. 1 & July 1	311,245.78	8,200.83	3,750.00
\$14,075,000.00	Total			\$14,012,940.91	\$689,169.17	\$217,442.24

¹\$600,000 par value redeemed March 10, 1913.

DIVISION OF EDUCATIONAL ENQUIRY

Schedule A, Exhibit 2

Par Value	Securities	Date Acquired	Date Interest due	Book Value	INTEREST	
					Accrued Year ending Sept. 30, 1913	Accrued Sept. 30, 1913
\$1,000,000.00	Chicago & Northwestern Railway Co. 4% ¹ General Mortgage Gold Coupon Bonds. Due November 1, 1987	March 10, 1913	May 1 & Nov. 1	\$1,000,000.00	\$36,666.66	\$16,666.66
250,000.00	Westchester County, New York, Registered Bronx Valley Sanitary Sewer District 4% ² Bonds. Due January 1, 1933-January 1, 1974, Inc.	March 10, 1913	Jan. 1 & July 1	250,000.00	7,500.00	2,500.00
\$1,250,000.00	<i>Total</i>			\$1,250,000.00	\$44,166.66	\$19,166.66

¹ Interest accrues to the Foundation from November 1, 1912.

² Interest accrues to the Foundation from January 1, 1913.

GENERAL ENDOWMENT FUND

SEPTEMBER 30, 1913

Schedule A, Exhibit 3

SEPTEMBER 30, 1912. BALANCE AT CREDIT OF FUND	\$13,000,000.00
ADD:	
Premium received March 10, 1913, on redemption of \$500,000.00 par value of United States Steel Corporation 5% Bonds, Series "D"	75,000.00
September 30, 1913. Balance per Balance Sheet	<u>\$13,075,000.00</u>

The treasurer has submitted from time to time to the executive committee statements of receipts and expenditures, which were printed and sent to all trustees. These statements, together with the report of the auditing firm just quoted, give a complete account of the financial operations of the Foundation for the period covered by this report.

ROBERT A. FRANKS, *Treasurer.*



INDEX



INDEX

- Academic titles and salaries of college teachers,** 98-111.
Acton, Lord, 46.
ADELPHI COLLEGE, 108.
Advisory Committee on the Distribution of Exchequer Grants, England, 40.
Age and salary, relation of, 106 f.
Agricultural education in Iowa, 95 f.
ALABAMA, UNIVERSITY OF, 120.
Allowances, expenditure in, 14.
 Financial data concerning, 10.
 Geographical distribution of, 13.
 In force, 11.
 Load of, assumed, 15.
 Total number granted, 12.
Alumni and college policy, 90.
AMERICAN ACADEMY AT ROME, and retiring allowances, 6.
AMERICAN BAR ASSOCIATION, and study of legal education, 31.
AMERICAN MEDICAL ASSOCIATION, Council on Education, 32.
AMERICAN MUSEUM OF NATURAL HISTORY, pension system, 37 f.
AMERIKA INSTITUT, Berlin, 58.
AMHERST COLLEGE, 101, 103, 105.
Andrews, Martin Register, deceased, 127.
Andrews, Mrs. Martin R., pension voted, 8.
Apprenticeship system in American higher institutions, 107 f.
ARMOUR INSTITUTE OF TECHNOLOGY, 108.
ARMSTRONG COLLEGE, 39.
ASHLAND COLLEGE, Ohio, 120.
Assistants in American higher institutions, 107 f.
Association of Colleges and Secondary Schools of the Southern States, 64.
Aubert, Alfred Bellamy, deceased, 127.

Babcock, Stephen Moulton, retired, 8.
Baker, James H., retired, 9.
Balance Sheet of Division of Educational Enquiry, 145.
 Foundation, General Endowment, 144.
Bancroft, Colman, retired, 9.
Bar, admissions to the, 27-31.
BARNARD COLLEGE, 64.
BATES COLLEGE, 100, 103, 105.
BAYLOR COLLEGE, Texas, 122.
BEAUMONT COLLEGE, Kentucky, 119.
BEDFORD COLLEGE FOR WOMEN, London, 39.
Bell, Mr. C. H., on Prussian exchange system, 57.
BELOIT COLLEGE, 100, 103, 105, 108.
BETHANY COLLEGE, West Virginia, 124.

BIRMINGHAM, UNIVERSITY OF, 39.
Bisbee, Marvin Davis, deceased, 128.
BLINN MEMORIAL COLLEGE, Texas, 120.
Board of Education, England, and university pensions, 40 f.
Board of Estimate and Apportionment, New York, pensioning power of, 49.
Böhme, Traugott, 57.
Booker, Ira P., retired, 8.
BOWDOIN COLLEGE, 8, 100, 103, 105.
Brastow, Mrs. Lewis O., pension voted, 8.
BRIDGEWATER COLLEGE, Virginia, 123.
BRISTOL, UNIVERSITY OF, 39.
BROWN UNIVERSITY, 66, 108, 121.
 Pension system, 38.
Browne, William Hand, deceased, 128.
Burchardt, Hermann, 57.
Bureau of Municipal Research, 47, 48.
Butler, Nicholas Murray, 4.
Byerly, William Ellwood, retired, 8.

CALIFORNIA, UNIVERSITY OF, 8, 101-103, 105, 109, 116.
 Pension system, 35.
CAMBRIDGE, UNIVERSITY OF, 46.
CARLETON COLLEGE, 100, 103, 105.
Carlson, Henry Edwin, 56.
Carnegie, Mr. Andrew, gift to Vanderbilt University, 32.
 Gift for Division of Educational Enquiry, 3, 7, 19 f.
CARNEGIE CORPORATION OF NEW YORK, 24 f., 32.
CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE, 25.
CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING, 25.
 And college catalogues, 111.
 Division of Educational Enquiry, 3, 7, 19-24, 143, 145.
 Endowment, income and expenditure of, 3, 142 f.
 General endowment, 4, 142, 144.
 Officers of, iii.
 Trustees of, iii.
CARNEGIE HERO FUND, 25.
CARNEGIE INSTITUTE, Pittsburgh, 25.
CARNEGIE INSTITUTION OF WASHINGTON, 25.
CASE SCHOOL OF APPLIED SCIENCE, 101, 103, 105.
Case system, 29.
Catalogues, college, 111-124.
 And courses of instruction, 120.
 And endowment, income, and expenditures, 117 f.
 And entrance requirements, 119.

- And fellowships, scholarships, and prizes, 122.
- And lists of students, 122.
- And literary form, 112.
- Contents of, 113 f.
- Function of, 112.
- Preparation of, 124.
- Presentation of, 113.
- CATHOLIC UNIVERSITY OF AMERICA, 117.
- Cattell, *American Men of Science*, 106 f.
- CENTENARY COLLEGE, Louisiana, 117, 119, 122.
- CENTRE COLLEGE OF KENTUCKY, 100, 103, 105.
- Certificates from secondary schools, 66.
- CHICAGO, UNIVERSITY OF, 64, 107, 114-116, 121, 122.
- Church Pension Fund, 47.
- CINCINNATI, UNIVERSITY OF, 100, 103, 105, 108.
- CINCINNATI MEDICAL SCHOOL, 32.
- CLARK COLLEGE, 63, 100, 103, 105.
- CLARKSON SCHOOL OF TECHNOLOGY, 100, 103, 105.
- Clinton, De Witt, 16.
- College, use of term, 120.
- College catalogues, 111-124.
- College entrance requirements, evolution of, 63-67.
- In Southern colleges, 64.
- College teachers, financial status of, 98-111.
- Colleges and high schools, adjustment of, 63.
- Collins, Gyfford Davidson, 56.
- COLORADO, UNIVERSITY OF, 9.
- COLORADO COLLEGE, 108.
- COLUMBIA COLLEGE, 64.
- COLUMBIA UNIVERSITY, 8, 66, 101-103, 105, 107, 109, 114, 116, 117, 121.
- Pension system, 35.
- Commissioners of Accounts, New York, investigation of pensions by, 49 f.
- Conservatories of music, professors in, and retiring allowances, 6.
- CORNELL UNIVERSITY, 101, 103, 105, 107, 114, 116.
- Pension system, 34.
- COTNER UNIVERSITY, Nebraska, 122.
- Council on Medical Education, requirements of, 33.
- Course, use of term, 120.
- Courses of instruction, college catalogues on, 120 f.
- Cowles, Augustus Woodruff, deceased, 128.
- CROOKSTON COLLEGE, Minnesota, 118.
- CUMBERLAND COLLEGE, Arkansas, 122.
- Curriculum, use of term, 120.
- Curtis, John Green, deceased, 129.
- Dale, Sir Alfred, 41.
- Daniells, William Willard, deceased, 129.
- DARTMOUTH COLLEGE, 8, 100, 102, 103, 105.
- Deferred annuity, 43, 44.
- Degrees, safeguarding of, 77.
- DELAWARE COLLEGE, 123.
- Demonstrator, use of term, 6.
- De Mortuis, 125-138.
- Denmark, agriculture and education in, 96 f.
- Denominational institutions, Carnegie Foundation and, 30.
- Department, use of term, 120.
- Deyoe, Superintendent, 93.
- DICKINSON COLLEGE, 100, 103, 105, 108.
- Division of Educational Enquiry, 3, 7, 19-24.
- Balance sheet of, 145.
- Income and expenditure of, 4, 143.
- Securities and income, 148.
- DRAKE UNIVERSITY, 100, 103, 105.
- DRURY COLLEGE, 100, 103, 105.
- DURHAM, UNIVERSITY OF, 39.
- EAST LONDON COLLEGE, 39.
- Eaton, Amos, 18.
- Eller, William Henri, 56.
- Elliott, Professor Edward C., 26.
- Emerson, Charles Franklin, retired, 8.
- Endowment assurance policies, 43, 44.
- Endowment of the Carnegie Foundation, 3.
- Engineering education, study of, 5 f.
- English universities, pension system, 39-46.
- Pension system and insurance companies, 43, 44.
- Entrance requirements and college catalogues, 119.
- College, 63-67.
- Enforcement of, 66.
- Prescribed, 64.
- To professional schools, 66 f.
- Equipment, descriptions of, in college catalogues, 118.
- Evenius, Johannes, 57.
- Ewing, Professor James A., 41.
- Exchange of Teachers between Prussia and the United States, 56-59. [58.]
- Exchange Teachers, organization of, in Berlin.
- Executive Committee of the Carnegie Foundation, iii.
- Meetings of, 6 f.
- Expenditure in allowances, 14.
- Expenditure of Foundation, General Endowment, 142.
- Division of Educational Enquiry, 143.
- FACULTIES, lists of, in college catalogues, 116.
- Farrington, Professor Edward, 26.
- Financial data concerning allowances, 10.
- Financial statement of colleges, 117 f.
- Financial status of college teachers, 98-111.
- Fire Department, New York, pension system, 52.

- Fischer, Ernest Gotthilf, 56.
 Fisher, Daniel Webster, deceased, 130.
 Fitz, Reginald Heber, deceased, 130.
 Florida, higher education in, 73.
 FRANKLIN COLLEGE, 100, 103, 105.
 Fontaine, William Morris, deceased, 131.
 FORDHAM UNIVERSITY MEDICAL SCHOOL, 32.
 Funds and accumulations of Division of Educational Enquiry, 145.
 General Endowment, 144.
- Gatch, Thomas Milton, deceased, 132.
 Gaynor, Mayor, 49.
 GENERAL EDUCATION BOARD, 32.
 Geographical distribution of allowances granted, 13.
 GEORGETOWN UNIVERSITY, District of Columbia, 120.
 Gerechter, Emanuel, retired, 8.
 Gorgas, Amelia Gayle, deceased, 132.
 GOUCHER COLLEGE, 64, 108.
 GRACELAND COLLEGE, Iowa, 119, 122, 123.
 Greene, Franklin B., 18.
 GREER COLLEGE, Illinois, 117.
 GRINNELL COLLEGE, 63, 100, 103, 105.
- Hackney, Mr. Edward T., 72.
 Hadow, Dr. William H., 41.
 HAMLINE UNIVERSITY, 63.
 HARVARD UNIVERSITY, 8, 66, 101-103, 105, 107, 109, 114, 116, 120-122.
 Medical School, 67.
 Pension Plan, 33.
 Hathaway, Joel, 56.
 Herbruck, Wendell, 56.
 High schools and colleges, adjustment of, 63.
 Higher education, state regulation of, 67-77.
 Higher educational institutions, coördination of, 78.
 Hillegas, Professor M. B., 26.
 HIRAM COLLEGE, 9.
 HOBART COLLEGE, 100, 103, 105.
 Hobson, John A., 41.
 Hoch, Ex-Governor E. W., 71.
 Hodges, Governor, 71.
 HOPE COLLEGE, 63.
 Hopkinson, Sir Alfred, K. C., 41.
 Howe, Henry Marion, retired, 8.
 Hume, Mrs. Thomas, pension voted, 9.
 Humphreys, President, 4.
- Idaho, Commissioner of Education of, 70.
 Higher education in, 69 f.
 State Board of Education, 69.
 State normal schools, 69.
 University of, 69 f.
- ILLINOIS, UNIVERSITY OF, 64, 114, 116, 120, 121.
- Income of Carnegie Foundation, 4.
 Division of Educational Enquiry, 4, 143.
 General Endowment, 4, 142.
 Incorporation of colleges, safeguarding, 77.
 Indiana, higher education in, 73.
 INDIANA UNIVERSITY, 73, 90, 100, 103, 105, 108.
 Instructors, college, salaries of, 103.
 Insurance companies and pensions in English universities, 43, 44.
 Iowa, colleges and universities, student enrolment in, 94.
 Higher education in, 73, 78-80.
 Politics and education in, 78-98.
 Problem of education in, 92-98.
 State Board of Education, 78, 81-98.
 State College of Agriculture and Mechanics, 78.
 State Teachers College, 78, 119.
 State University, 78 f.
- JOHNS HOPKINS UNIVERSITY, 8, 32, 64, 101-103, 105, 109.
- Kamitsch, George, 57.
 Kansas, higher education in, 70-73.
 State Agricultural College, 70 f.
 State normal schools in, 70 f.
 University of, 70 f., 120.
 KANSAS CITY UNIVERSITY, 117, 120.
 Kartzke, Georg, 57.
 Kendrick, Georgia A., retired, 8.
 KENTUCKY, UNIVERSITY OF, 64.
 KING'S COLLEGE, London, 39.
 KING'S COLLEGE FOR WOMEN, London, 39.
 Klay Bill, Iowa, 86.
- LAFAYETTE COLLEGE, 108.
 Langdell, Dean, 29.
 Lanza, Gaetano, retired, 8.
 Lattimore, Samuel Allan, deceased, 132.
 Lattimore, Mrs. Samuel A., pension voted, 8.
 Laue, Franz, 57.
 LAWRENCE COLLEGE, 8, 100, 103, 105, 122.
 Learned, Dr. William S., 26.
 LEBANON UNIVERSITY, Ohio, 113.
 LEEDS, UNIVERSITY OF, 39.
 Legal education, study of, 21, 27-31.
 LEHIGH UNIVERSITY, 8, 100, 103, 105.
 LELAND STANFORD UNIVERSITY, 63, 101-103, 105, 109, 114.
 Leonard, Mr. S. A., on Prussian exchange system, 56.
 Lewis, Mrs. Cora G., 71.
 LIVERPOOL, UNIVERSITY OF, 39.
 LOMBARD COLLEGE, Illinois, 123.
 LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE, 39.

- McCormick, Sir William, 41.
 McCutchen, George Boyd, deceased, 133.
 McCutchen, Mrs. George B., pension voted, 8.
 MCGILL UNIVERSITY, 114.
 McRae, Emma M., retired, 8.
 MACALESTER COLLEGE, 63.
 Mallet, John William, deceased, 133.
 Mallet, Mrs. John William, pension voted, 8.
 MANCHESTER, UNIVERSITY OF, 39.
 MARIETTA COLLEGE, 8, 100, 103, 105.
 Marx, Professor Guido, 102.
 MARYLAND COLLEGE FOR WOMEN, 120.
 Maryland State Board of Education and approval of colleges, 77.
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY, 8, 83, 101, 103, 105, 109, 114. [77.
 Massachusetts legislature and college charters, Teachers' pension system, 46.
 Meaker, Arthur E., retired, 8.
 Medical education, 22, 24.
 Medical schools, classification of, 32.
 Decreasing list of, 31-33.
 Entrance requirements to, 66 f.
 MIAMI UNIVERSITY, 76.
 Michigan, higher education in, 74.
 Law on incorporation of colleges, 77.
 University of, 63, 101, 103, 105, 107, 114, 115, 120.
 MIDDLEBURY COLLEGE, 100, 103, 105.
 Mills, Susan Lincoln, deceased, 134.
 MINNESOTA, UNIVERSITY OF, 64, 100, 102, 103, 105, 114, 120.
 Mississippi, higher education in, 73.
 MISSOURI, UNIVERSITY OF, 64, 100, 103, 105, 114.
 Missouri College Association, 66.
 Montana, higher education in, 67-69.
 School of mines, 67 f.
 State normal schools in, 67 f.
 University of, 67 f.
 MONTANA COLLEGE OF AGRICULTURE AND MECHANIC ARTS, 67 f.
 Montgomery, Henry, retired, 8.
 MOORE'S HILL COLLEGE, Indiana, 123.
 MOUNT HOLYOKE COLLEGE, 100, 103, 105.
 Müller, Max, 57.
 Murphy, Edgar Gardner, deceased, 135.
 Mutual Life Insurance Company, 53.
 National Education Association, 63 f.
 NAZARINE UNIVERSITY, California, 121.
 NEBRASKA, UNIVERSITY OF, 114.
 New England College Entrance Certificate Board, 66.
 New Jersey State Board of Education and approval of colleges, 77.
 NEW YORK, UNIVERSITY OF THE STATE OF, and control of colleges, 77.
 New York City Municipal Pensions, 47-55.
 Teachers' Retirement Fund, 53-55.
 NEW YORK UNIVERSITY, 114, 117.
 NORTH CAROLINA, UNIVERSITY OF, 9, 64.
 North Central Association of Colleges and Preparatory Schools, 66.
 NORTHWESTERN UNIVERSITY, 114.
 OBERLIN COLLEGE, 100, 102, 103, 105, 108.
 Ohio, higher education in, 76.
 OHIO NORTHERN UNIVERSITY, 119.
 OHIO STATE UNIVERSITY, 76, 114.
 OHIO UNIVERSITY, 63, 76.
 Oklahoma, higher education in, 73.
 Olshausen, Dr. George R., 26.
 OSKALOOSA COLLEGE, Iowa, 117.
 Osler, Sir William, 41.
 PACIFIC UNION COLLEGE, California, 123.
 PALMER COLLEGE, Missouri, 123.
 Parker, Isaac Augustus, deceased, 136.
 Parsons, Eben Burt, deceased, 136.
 Parsons, Mrs. Eben B., pension voted, 8.
 Part-time service and retiring allowances, 4 f.
 Patton, Francis Landey, retired, 8.
 Pennsylvania, college and university council, 77.
 PENNSYLVANIA, UNIVERSITY OF, 114, 117, 120.
 PENNSYLVANIA COLLEGE, 123.
 Pension commission, New York, appointment of, 50.
 Pension systems, new, 36-47.
 Supplementary, 33-35.
 People's high schools, 97.
 Perkins, Mr. George W., 50.
 Peterson, Principal, 4.
 PHILLIPS UNIVERSITY, Oklahoma, 116.
 Pilot, William, deceased, 136.
 PITTSBURGH, UNIVERSITY OF, 121.
 Politics and education in Iowa, 78-98.
 Pope, Thomas E., retired, 8.
 PRINCETON UNIVERSITY, 8, 66, 101-103, 105, 109, 114.
 Professional schools, entrance requirements for, 66.
 Professors, college, grades of, 99 f.
 Salaries of, 98-111.
 Prussian Exchange System, value of, 56-58.
 Prussian Exchange Teachers, 57.
 PURDUE UNIVERSITY, 8, 73, 90, 100, 103, 105, 108.
 Radenhausen, Paul, 56.
 Raleigh, Professor Walter, 41.
 REDLANDS, UNIVERSITY OF, California, 116.
 Redlich, Professor Josef, 29.
 REED COLLEGE, 63.
 Reimsen, President, resignation of, 6.

RENSSELAER POLYTECHNIC INSTITUTE, 83, 101, 103, 105.

Admission to Associated List, 16-19.

Research work and retiring allowances, 5, 6.

Retiring allowances and part-time service, 4 f.

And professors in conservatories of music, 6.

And research work, 5, 6.

Granted in 1913, 8 f.

Reutlinger, Mr. Robert von, 47.

Rhys, Sir John, 41.

Richards, Mrs. Eugene L., pension voted, 8.

RIPON COLLEGE, 100, 103, 105.

ROCHESTER, UNIVERSITY OF, 8, 100, 103, 105.

Rockefeller Institute for Medical Research, pension system, 36.

Rockwood, Charles Greene, deceased, 137.

Rücker, Sir Arthur W., 41.

Rule 1, amendment of, 4.

Runciman, Rt. Hon. Walter R., 41.

Sadler, Dr. Michael, 41.

Salaries in higher institutions, changes in, 1907-13, 109-111.

Salaries of college teachers, 98-111.

Salary in relation to age, 106 f.

Sander, Gustav, 57.

School, use of term, 120.

SCHOOL OF CLASSICAL STUDIES, Rome, 6.

Securities and income, Division of Educational Enquiry, 148.

General Endowment, 146, 147.

Senger, Joachim Henry, retired, 8.

Seyffert, Walther, 57.

SHEFFIELD, UNIVERSITY OF, 39.

Skinner, Sarah, deceased, 137.

Slocum, William F., vice-chairman of trustees, 4.

Smith, Charles Josiah, retired, 8.

Smith, Thomas Alexander, retired, 8.

SOPHIE NEWCOMB COLLEGE, 100, 103, 105.

Soulé, Frank, deceased, 138.

Soulé, Mrs. Frank, pension voted, 8.

South Carolina, high schools, state supervisor of, 66.

University of, 64, 108.

South Dakota, higher education in, 73.

Southern Association of College Women, 64.

Southern colleges, entrance requirements in, 64.

SOUTHWESTERN UNIVERSITY, Texas, 116, 123.

State regulation of higher education, 67-77.

STEVENS INSTITUTE OF TECHNOLOGY, 66, 101, 103, 105.

Stubbs, Governor, 71.

Student lists and college catalogues, 122.

Students of collegiate rank, 65.

SUFFOLK LAW SCHOOL, Boston, 77.

SULLINS COLLEGE, Virginia, 123.

Super, Ovando Byron, retired, 8.

Surveys, educational, 22 f.

SWARTHMORE COLLEGE, 100, 103, 105.

TAYLOR UNIVERSITY, Indiana, 122.

TEACHERS COLLEGE, COLUMBIA UNIVERSITY, pension system, 38 f.

TEMPLE UNIVERSITY, Philadelphia, 118.

Texas, Agricultural and Mechanical College, 74 f.

Higher education in, 74.

University of, 74.

Thorndike, Professor Edward L., study of college salaries, 98-111.

Tillinghast, Charles Carpenter, 56.

TORONTO, UNIVERSITY OF, 8, 101, 103, 105, 109, 114.

Treasurer's Report, 140-149.

TRINITY COLLEGE, Connecticut, 100, 103, 105, 108.

TRI-STATE COLLEGE, Indiana, 120.

Trustees, annual meeting, 4.

Trustees of the Carnegie Foundation, iii.

TULANE UNIVERSITY, 100, 103, 105.

Tuttle, Henry Albert, retired, 8.

UNION COLLEGE, 100, 103, 105.

UNION COLLEGE, Nebraska, 121, 123. [119.]

United States Bureau of Education, 63, 118.

UNIVERSITY COLLEGE, London, 39.

UNIVERSITY COLLEGE, Reading, 39.

VALPARAISO UNIVERSITY, Indiana, 116, 118.

VANDERBILT UNIVERSITY, 64.

Medical school, 32.

Van der Smitten, William Henry, retired, 8.

Van Rensselaer family and Rensselaer Polytechnic Institute, 16-19.

VASSAR COLLEGE, 8, 101, 103, 105, 108.

Vermont, educational commission, 26.

State of, request for survey, 3, 7.

Study of education in, 26 f.

University of, 100, 103, 105.

VIRGINIA, UNIVERSITY OF, 8, 64, 101, 103, 105, 117, 120.

WABASH COLLEGE, 100, 103, 105.

Wait, Lucien Augustus, deceased, 138.

WALLA WALLA COLLEGE, Washington, 121.

Washington, State College, 75.

State normal schools in, 75.

State of, higher education in, 75.

University of, 75.

WASHINGTON AND JEFFERSON COLLEGE, 8, 100, 103, 105, 108.

WASHINGTON UNIVERSITY, St. Louis, 100, 103, 105, 108.

Medical School, 32.

- Watson, Judge John H., 26.
Weir, John Ferguson, retired, 8.
WELLESLEY COLLEGE, 66, 100, 103, 105.
WESTERN RESERVE UNIVERSITY, 8, 100, 103, 105,
108.
 School of Medicine, 32.
WESTMINSTER COLLEGE, Colorado, 116.
WESTMINSTER COLLEGE, Pennsylvania, 123.
WEST POINT MILITARY ACADEMY, 66.
West Virginia, higher education in, 73.
 University of, 64.
WHITMAN COLLEGE, 63.
- WILLIAMS COLLEGE, 8, 101, 103, 105.
 Pension system, 35.
WINONA COLLEGE, Indiana, 119, 122.
WISCONSIN, UNIVERSITY OF, 8, 64, 101, 103, 105,
114, 120.
Wolferz, Louis E., 56.
WORCESTER POLYTECHNIC INSTITUTE, 100, 103, 105.
- YALE UNIVERSITY, 8, 66, 101-103, 105, 107, 109,
113, 114, 119, 120.
 Medical School, 32.
YORK COLLEGE, Nebraska, 123.

LB
2334
C3
1912/13

Carnegie Foundation for the
Advancement of Teaching
Report

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY
